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ABSTRACT

This second volume of the Image of the World of Work program reports the development of instruments, evaluation design, changes in teachers' attitudes toward work associated with participation in workshops, lesson plans, changes in pupil scores in relation to characteristics of their teachers, data analysis, and generalizations on the outcomes of the intervention activities. Generally there was a movement toward more desirable or mature attitudes by all of the students in both the project and control groups. As expected, girls scored more in the desirable or favorable direction than did boys. Fifty tables supplement the narrative information. Volumes I and III are available as VT 009 939 and VT 009 985 respectively. "The World of Work and Learning," a position paper which provides an overview of all three phases of the project, is available as VT 009 940. (CH)

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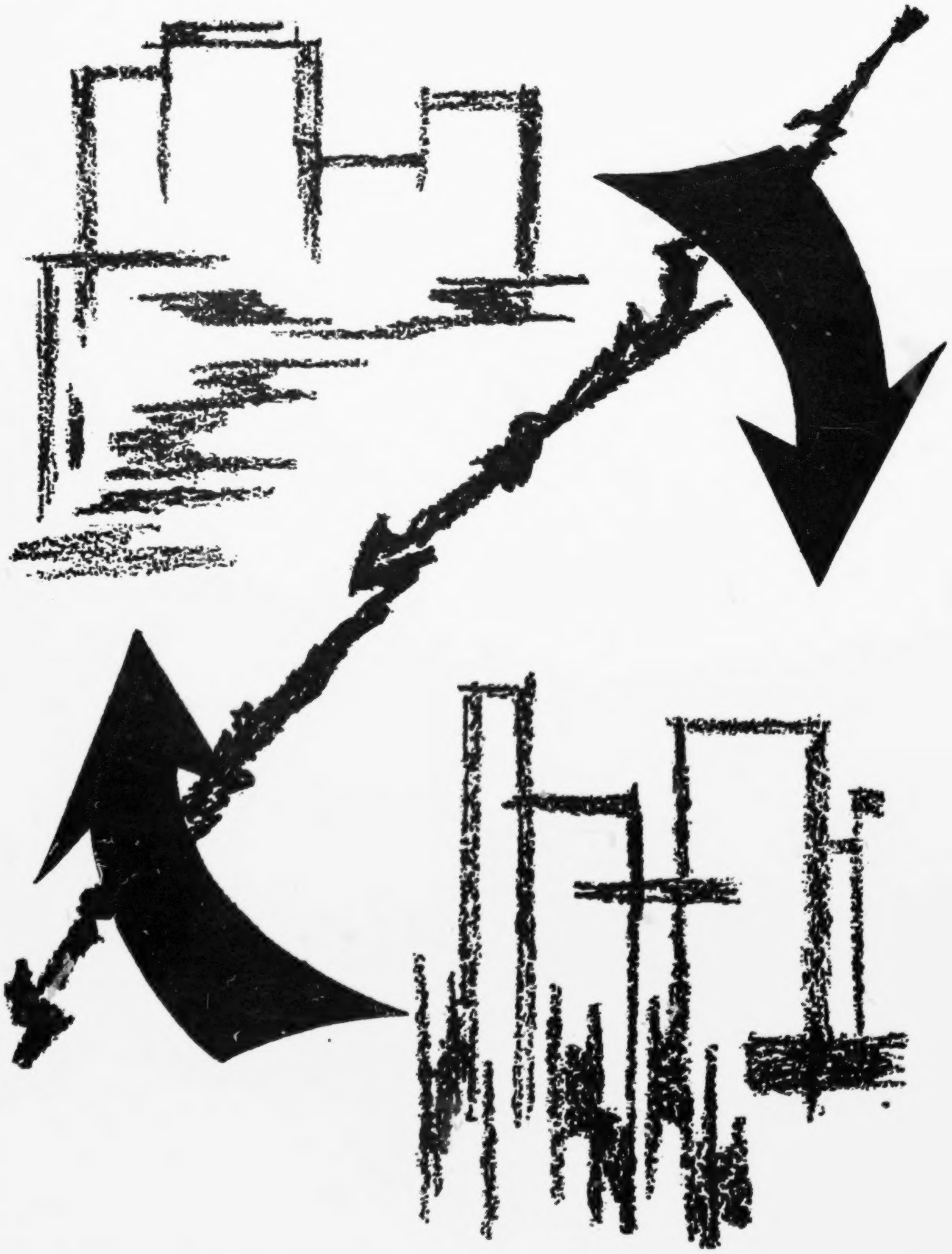

TECHNICAL REPORT

IMAGE OF THE WORLD OF WORK - VOL. II

DEVELOPMENT OF INSTRUMENTS AND EVALUATION

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ROCKY MOUNTAIN EDUCATIONAL LABORATORY

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OCCUPATIONAL EDUCATION PROGRAM

IMAGE OF THE WORLD OF WORK

DEVELOPMENT OF INSTRUMENTS AND EVALUATION

Technical Report **Volume II**

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DEVELOPMENT AND EVALUATION OF INSTRUMENTS

Development of Instruments

Prerequisite to the successful conduct of the present project was the construction of several types of instruments to be used in assessing attitudes and attitude change. In general, the instruments to be constructed (or selected) were of two types: instruments designed for use with teachers, and instruments designed for use with students. In addition, it was assumed that the instruments should represent a variety of formats so as to avoid boredom or constant mental set on the part of the examinees.

Although instruments were developed for both teachers and pupils as individual groups, it should be noted at this point that the teachers in the experiment responded to the pupils' instruments as well as to the instruments designed for them. The instruments were constructed or selected to fit into following research design:

1. administration of teacher and pupil instruments to an experimental group of teachers and a control group of participants in a one-week workshop;

2. administration of the same instruments to the experimental teachers at the completion of the workshop;

3. administration of the pupil instruments near the beginning of the academic year to pupils of the teachers who had participated in the workshop as well as to a control group of pupils;

4. administration of the pupil instruments to both experimental and control pupils at the end of the academic year.

Specific refinements and variations in the basic design will be discussed in later sections of this report.

Teacher Instruments

The following instruments were designed primarily for use with the teachers involved in the project:

1. Opinion survey on the presentation of occupational information - Inasmuch as the workshop in which the experimental teachers were to participate prior to the experimental year was designed to assist teachers to capitalize upon the subject matter content of language arts and social studies in presenting occupational information, the first instrument constructed was designed to assess reaction of language arts and social studies teachers to the concept of integrating occupational information into subject matter content. Demonstration projects have shown the appropriateness of several different ways of presenting occupational information to junior high school pupils. It was therefore decided to use the teachers' reactions to integrated study in relation to other approaches as a basis for assessing attitudes toward the integrated study concept. Six approaches to presenting occupational information were identified from current literature in the field of guidance and counseling. These were: career day, occupations course, occupations library, integrated study, psychological tests, and occupational firm assemblies. Of these six approaches, only one, integrated study, can be thought of as representative of the experimental approach to be used in the project. In its initial form, the opinion survey on the presentation of occupational information required examinees to scale the six approaches according to a paired-comparison technique. This particular paired comparison technique is shown in Table 1. After an initial trial using this method it was abandoned as being unnecessarily involved and the simpler approach of asking the teachers was adopted. The instrument in this format is shown in Exhibit A. In scoring the instrument it was assumed that the average rank assigned to each approach by a group in question would provide a meaningful basis for interpretation. It was further assumed that the approach "integrated study" would shift upward in ranks as teachers became more favorable toward this approach. In a preliminary trial of this instrument with junior high school teachers before and after hearing about the project reported herein, the approach "integrated study" changed in rank from 2.9 to 1.3. This shift was interpreted as indicating that the ranking procedure was sufficiently sensitive to reflect change in opinion about various ways to present occupational information.

2. Relative importance of educational objectives - Since the participants in the experiment were language arts and social studies teachers, it was assumed that they had received training which exposed them to broad educational objectives without giving particular attention to objectives related to occupational education. To determine how important the social studies and language arts teachers in the experiment considered occupational objectives, it was decided to ask them to rank such objectives within a list of many broad educational subjects related to other areas. On the basis of literature related to educational philosophy and occupational information, twelve broad objectives were designated for use in this instrument. These objectives were edited and reviewed by several school administrators and professors. The twelve objectives in their final form are shown in the instrument in Exhibit B. Careful examination of the twelve objectives indicates that three of them are clearly identified with occupational choice. These three are number 3, "broad knowledge of the world of work;" number 7, "sound basis for choosing an occupation;" and number 12, "accurate knowledge of self." It was assumed that regardless of the relative importance attached to these three objectives prior to learning about the project, the relative ranking of the three objectives would move upward as favorable reaction to the project developed. This instrument was given a trial administration prior to its use in the project. When the instrument was administered to 27 Rocky Mountain Educational Laboratory council members before and after hearing about the project, ranks assigned the objectives were as follows: "Broad knowledge of the world of work" was assigned a rank of 6 prior to hearing about the project and a rank of 3 after hearing about the project. "Sound basis for choosing an occupation" was assigned a rank of 8 before hearing about the project and a rank of 5 after hearing about the project. "Accurate knowledge of self" was assigned a rank of 5 prior to hearing about the project and a rank of 4 after hearing about the project. The rank order coefficient of correlation between the pre- and post- administration of the instrument was .83 for the twelve objectives. When the educational objectives instrument was administered to 58 junior high school teachers prior to hearing about the project and after hearing about the project, changes in the three key objectives were as follows: "Broad knowledge of the world of work" ranked 9 in the first administration and 4 in the second administration. "Sound basis for choosing an occupation" ranked 8 in the first administration and 6 in the second administration. "Accurate knowledge of self" ranked first in both administrations. Rank order correlation for the two administrations was .83. Complete results of this administration are shown in Table 2. On the basis of this administration, it was concluded that the relative importance of educational objectives instrument was capable of reflecting shift in opinion about educational objectives related to occupations.

3. *Importance of questions about occupations* - To assess the extent to which teachers participating in the workshop grasped concepts associated with modern theories of vocational choice, two parallel instruments were designed.

One of these instruments related to concepts of occupation and the other related to concepts of self. The format used for both of these instruments was that of presenting lists of questions to the examinees and asking them to categorize the questions according to relative importance, using a Q-Sort technique. The fourteen questions as they appeared in the final form of the importance of questions about occupations are shown in Exhibit C.

Careful examination of these questions reveals that several relate to outmoded concepts of vocational choice and others relate to current theories. For example, questions about salary, working hours, vacation and location are considered archaic to current occupational choice theories, whereas questions related to discretionary decisions, involvement with the finished product, pressure and deadlines, on the job, association with people in the work situation, and the content of the work as it relates to people, data or things are emphasized in current vocational choice.

Inasmuch as the Q-Sort technique involves assigning values of 4, 3, 2, 1, and 0 to the various levels of importance of the factors being evaluated, it was assumed that changes in the understanding of new concepts of vocational choice would be associated with shifts toward large numbers. Specifically, it was assumed that items numbered 2, 5, 10, 12, and 14 would be associated with larger numbers after a workshop experience than before.

It should be emphasized that construction of this instrument assumes exposure to both new as well as outmoded concepts of vocational choice. Absence of this exposure will result in comparable values both before and after a workshop.

4. Importance of questions about self - The instrument "Importance of questions about self" was designed to parallel the instrument "The importance of questions about occupations." This instrument was set up with an identical format to the foregoing instrument, but the questions listed for evaluation were considered to be more difficult to discriminate among than the questions related to occupations. This instrument is shown as Exhibit D. Examination of the questions reveals that number 1, 3, 5, 6, 8, 10, 11 and 13 are illustrative of modern occupational choice theory in contrast to the remaining questions. As indicated, however, the remaining questions were considered to be relatively "close" to the key questions. As in the case of the foregoing instrument, lack of familiarity with newer concepts of vocational choice will result in a nearly random distribution of all items across the Q-Sort categories.

5. Crites vocational maturity scale - A review of the literature revealed that Crites from the University of Iowa had developed and validated a vocational maturity scale for junior high students. This instrument was revised for adults by Sheppard as shown in Exhibit E. Rationale for administering this instrument was that it would provide an indication of the personal vocational maturity of each teacher and that this could be related to change in the scores of pupils involved in the experiment.

Summary

It was anticipated that the five instruments described in this section would be administered to the experimental teachers at the beginning and again at the end of the workshop which preceded the experimental year. It was also anticipated that the experimental teachers would respond to several of the instruments to be used to measure change in attitudes of their pupils who would participate in the project during academic year 1968-69. It was anticipated when the foregoing instruments were constructed that other instruments might be appropriate for administration at other periods during the experimental year. These instruments will be described later.

Pupil Instruments (See Appendix B)

As was noted previously, it was anticipated that the teachers would be asked to respond to many of the instruments constructed especially for pupils. As each instrument is described, its use with teachers will be indicated.

1. Opinions about Work - Central to the project reported herein was the assumption that seventh grade pupils would shift their attitudes toward being favorable to work as the result of exposure to certain instructional practices. The kinds of attitudes which pupils were expected to display following exposure to designated practices were defined in an outline prepared by the Rocky Mountain Educational Laboratory early in 1968. This outline reveals that the attitudes described are those toward which pupils were expected to change.

Using the outline as a guide, and correlating its contents with a literature review, more than 200 statements representing opinions about work were formulated. These statements sampled the outline in considerable depth and reflected varying attitudes toward work. To determine the degree of ambiguity of each statement and its strength, the statements were duplicated in Thurstone format and submitted to 50 judges for sorting. The format employed for this purpose is shown in Table 3. The item weights and indices of ambiguity for each of the statements are shown in Table 4. The weight represents the median of the scale values assigned to the item in the judging process and the index of ambiguity represents the difference between the 75th and 25th percentiles of the scale value distribution. It will be noted that the items in Table 5 are arranged in order of favorability toward work, the least favorable items appearing first. On the basis of the analysis of the judges' evaluation, 55 items for final use in Likert format were selected as shown in Exhibit G. Since the items had been scaled by the judges, the favorable end of the response continuum was known and a key for this instrument was constructed accordingly. It was assumed that change toward increased favorability about work would be reflected in a score of increasing magnitude.

To assess the teachers' attitudes toward work as well as to familiarize them with the instrument, it was administered to them before and after the workshop.

2. *Survey of Manpower and Economic Attitudes* - A survey of the literature revealed that Darcy and Powell of Ohio University had constructed an instrument to reflect attitudes toward work of eighth grade students. Inspection of this instrument revealed that 25 statements from the survey closely paralleled the content outline for the present project. In addition, it was noted that pre- and post- experimental treatment responses for individual items were available. The 25 pertinent items were assembled and reproduced as shown in Exhibit H. It was anticipated that no effort would be made to sum the responses to the 25 items as a total score, but that responses to each item would be tabulated individually. This instrument was also administered to the teachers.

3. *Work Cases* - To assess the extent to which exposure to specified values and attitudes about work would change attitudes of pupils to more nearly resemble those held by employers, the work cases instrument shown as Exhibit I was constructed. In constructing this instrument, actual situations were used as stimuli to which examinees were to respond. It was felt that choosing a specific alternative action for each situation would more nearly parallel an actual situation than a simple agree-disagree response to a statement. Thus, the instrument was designed to reflect attitudes paralleling those of employers and to involve specific situations.

To construct a key for the work cases instrument, it was mailed to 60 personnel managers employed by large firms. These individuals were asked to respond to the instrument according to the way their employer would prefer responses be given. (Fifty managers returned the questionnaire.) In other words, the key for this instrument was to be empirically derived. The percentage of the 50 personnel managers who chose each alternative response to all items is shown in Table 6. Item weights for each alternative were derived by selecting the left-hand digit of each percentage of responses for each alternative. For example, if 15 percent chose an alternative, the weight "1" was assigned to this alternative. If the percentage of responses was 78 percent, "7" became the weight.

Summary

The batteries of instruments administered to the pupils in the projects reported herein consisted of: (1) Opinions about Work, (2) Work Cases, and (3) Survey of Manpower and Economic Attitudes.

CHANGES IN TEACHER ATTITUDES TOWARD WORK ASSOCIATED WITH PARTICIPATION IN WORKSHOP

Introduction

In the second phase of the project reported herein, approximately 60 language arts and social studies teachers participated in a one-week workshop held at Cheyenne, Wyoming in order to learn the skills necessary to integrate occupational education into their subject matter presentation and to define the pupil attitudes toward work to be strengthened through their courses. A further discussion of the workshop content and possible effects will be reported at a later stage in this report.

Teacher instruments were administered to both an experimental and control group of teachers in an eight-state area. Experimental teachers were those designated to attend the Cheyenne Teachers Workshops and thereafter work closely with RMEL. Throughout the school year experimental teachers attended three workshops under the supervision of RMEL staff and consultants, and received various literature relating to the world of work.

Those teachers who were designated as control teachers did not participate in any conferences and/or workshops. Control teachers did not receive any occupational input or information from the RMEL staff, and only participated in completing the specified teacher instruments at selected times during the academic year.

Teacher instruments were administered to experimental teachers at the following specified times:

1. before the Cheyenne workshop (August 1968)-designated as *pre*-test.
2. at the completion of Cheyenne workshop (August 1968)-designated as *post*-test
3. at the end of the academic year (May 1969)-designated as *final*-test.

Since a portion of the experimental teachers were to take the instruments both at the beginning of the workshop and again at the close of the workshop, a design was identified which would assess the pretest sensitization which might occur as the result of two administrations so close together. This was accomplished through the use of an additional group, designated hereafter as Post-test Only group. The design was as follows:

Group A	Pretest	Workshop	Post-test	Final-test
Group B		Workshop	Post-test only	Final-test
Group C	......................Control Group of Teachers......................			

Group C completed teacher instruments at the beginning and end of the school year.

From this design (essentially a Solomon design) such influences as recall of items, pretest, sensitization, set, and regression can be identified.

Opinion Survey on the Presentation of Occupational Information

In Tables 1A, 1B, and 1C are shown the results of different administrations of the opinion survey on the presentation of occupational information which were completed by two experimental and one control group of teachers.

From Table 1A it can be seen that the approach "Integrated Study" was ranked first both at the beginning and end of the workshop and at the time of final-test administration. Apparently favorable attitudes toward this approach had already been generated prior to the workshop. This is understandable since the teachers knew that they would be studying this approach in the workshop and were attending the workshop to learn more about it. The workshop did enhance the favorable attitude toward this approach, however, as evidenced by the increase in mean rank assigned to the approach (change from 1.94 to 1.45). There was a slight downward shift (1.45 to 1.62) on the final administration, but the ranking remained stable. This is pointed out by a high Spearman Rank Order Correlation of .943 between the post and final-test.

Table 1A

Experimental Group (Pre-Post-Final)

Mean Ranks Assigned Six Approaches to Presenting Occupational Information

	Pre (N=32)		Post (N=31)		Final (N=27)	
Approach	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank
Career Day	(6)	4.75	(6)	4.90	(6)	4.62
Occupations Course	(2)	2.94	(2)	3.10	(2)	2.85
Occupational Library	(5)	4.01	(4)	3.94	(3)	3.48
Integrated Study	(1)	*1.94	(1)	*1.45	(1)	*1.62
Psychological Testing	(4)	3.69	(3)	3.71	(4)	4.03
Occupational Film Assemblies	(3)	3.53	(5)	3.97	(5)	4.41

Rank Order Correlation Coefficient

Pre-Post = .829
Post-Final = .943
Pre-Final = .771

Referring to Table 1B, the post-only group completed the workshop with even more favorable reactions toward the integrated study approach (mean rank = 1.32), suggesting that there may have been a slight influence from pre-test sensitization for the group taking the scale twice in a one-week period. There was again a slight drop in rank of the integrated study approach from 1.32 to 1.60.

Table 1B

Experimental (Post-Only) Post-Final

Mean Ranks Assigned Six Approaches to Presenting Occupational Information

Approach	Pre Rank	 Mean Rank	Post (N=31) Rank	 Mean Rank	Final (N=25) Rank	 Mean Rank
Career Day			(6)	4.68	(6)	4.40
Occupations Course			(2)	3.25	(2)	3.28
Occupational Library			(5)	4.00	(5)	3.96
Integrated Study			(1)	*1.32	(1)	*1.60
Psychological Testing			(4)	3.94	(3)	3.80
Occupational Film Assemblies			(3)	3.81	(4)	3.84

Rank Order Correlation Coefficient

Post-Final = .943

We may make several inferences from these data. First, attitudes toward the integrated study approach, although decreasing slightly between post-test and final-test administrations, remained highly stable over the ten month interval between the two tests. Second, *although the teachers in the workshop were already favorable toward the integrated study approach prior to the workshop, participation in the workshop enhanced the already favorable attitudes.*

In Table 1C, it is shown that the control teachers responded more favorably to the integrated study approach at the time of the second administration than the first (change from 3.32 to 2.69). When the experimental and control teachers (Table 1D) are compared, it is seen that *the experimental teachers rated the integrated study approach higher than the control group (1.62 and 1.60 versus 2.69).*

Table 1C

Control

Mean Ranks Assigned Six Approaches to Presenting Occupational Information

	Time 1 (N=25)		Time 2 (N=26)	
Approach	Rank	Mean Rank	Rank	Mean Rank
Career Day	(4)	3.40	(4.5)	3.81
Occupations Course	(2.5)	3.32	(4.5)	3.81
Occupational Library	(5)	3.84	(3)	3.77
Integrated Study	(2.5)	*3.32	(1)	*2.69
Psychological Testing	(6)	4.08	(6)	3.92
Occupational Film Assemblies	(1)	3.20	(2)	2.96

Rank Order Correlation Coefficient

Time 1-Time 2 = .671

Table 1D

Comparison Experimental Versus Control Groups

Final Mean Ranks Assigned Six Approaches to Presenting Occupational Information

	Group A (N=27)		Group B(N=25)		Group C(N=26)	
Approach	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank
Career Day	(6)	4.62	(6)	4.40	(4.5)	3.81
Occupations Course	(2)	2.85	(2)	3.28	(4.5)	3.81
Occupational Library	(3)	3.48	(5)	3.96	(3)	3.77
*Integrated Study	*(1)	1.62	*(1)	1.60	*(1)	2.69
Psychological Testing	(4)	4.03	(3)	3.80	(6)	3.92
Occupational Film Assemblies	(5)	4.41	(4)	3.84	(2)	2.96

It is concluded that participation in the Cheyenne workshop and several conferences and working relationships with the professional staff of the RMEL had a favorable effect on attitudes toward the integrated study approach of presenting occupational information.

Relative Importance of Educational Objectives

The ranks assigned the twelve educational objectives by Experimental Group A teachers are shown in Table 2A. Inspection of this table indicates that ranking two of the three "key" objectives, "accurate knowledge of self," "sound basis for choosing an occupation" and "broad knowledge of the world of work" changed in the predicted direction on the post-test. Rankings for the three key objectives remained the same for the final administration. Reaction to the item "sound basis for choosing an occupation" did not change in the predicted direction and suggests that this topic may not have been emphasized in the workshops and conferences as much as the other two.

Table 2A

Experimental (Pre-Post-Final)

Relative Importance of Educational Objectives

Objective	Pre (32)	Post (31)	Final (27)
Responsible citizenship	1	2	3
*Accurate knowledge of self	* 2	* 1	* 1
Effective oral and written communication	3	2	3
*Sound basis for choosing an occupation	* 4	* 5	* 5
*Broad knowledge of the world of work	* 5	* 4	* 4
Understanding of the decision-making process	6	7	6
Appreciation of democracy as a form of government	7	9	10
Preparation for family living	8	8	7
Adequate knowledge of physical and mental health	9	6	8
Subject matter mastery	10	10	9
Constructive use of leisure time	11	12	11
Appreciation of good music and literature	12	11	12

Rank Order Correlation Coefficients

Pre-Post = .916

Post-Final = .958

Pre-Final = .944

In Table 2B, it is shown that there were no changes in ranks among the three key objectives between the post-test and final administration.

Table 2B

Experimental (Post-Only)

Relative Importance of Educational Objectives

Objective	Pre	Post (31)	Final (25)
Responsible citizenship		2	2
*Accurate knowledge of self		* 1	* 1
Effective oral and written communication		3	3
*Sound basis for choosing an occupation		* 5	* 5
*Broad knowledge of the world of work		* 6	* 6
Understanding of the decision-making process		.4	4
Appreciation of democracy as a form of government		7	7
Preparation for family living		8	9
Adequate knowledge of physical and mental health		9	8
Subject matter mastery		10	10
Constructive use of leisure time		11	11
Appreciation of good music and literature		12	12

Rank Order Correlation Coefficient

Post-Final = .993

Table 2C exhibits the results of two administrations of the test to control teachers. Accurate knowledge of self remained first in the ranking, while sound basis for choosing an occupation decreased in rank and broad knowledge of the world of work increased slightly.

Table 2C

Control Group

Relative Importance of Educational Objectives

Objective	Time 1 (N=25	Time 1 (N=26)
Responsible citizenship	2	2
*Accurate knowledge of self	* 1	*1
Effective oral and written communication	3	3
*Sound basis for choosing an occupation	* 6	*8
*Broad knowledge of the world of work	*10	*9.5
Understanding of the decision-making process	4	4
Appreciation of democracy as a form of government	5	5
Preparation for family living	8	7
Adequate knowledge of physical and mental health	7	6
Subject matter mastery	9	9.5
Constructive use of leisure time	11	11
Appreciation of good music and literature	12	12

Rank Order Correlation Coefficient

Time 1-Time 2 = .977

Comparison of experimental versus control teachers on final test administrations in Table 2D shows the positive effect of the Rocky Mountain Educational Laboratory's influence on relative importance of educational objectives associated with the goals of occupational education.

Table 2D

Comparison Experimental Versus Control Groups

Final Ranks Assigned to Relative Importance of Educational Objectives

Objective	N=27 Group A	N=25 Group B	N=26 Group C
Responsible citizenship	2	2	2
*Accurate knowledge of self	*1	*1	*1
Effective oral and written communication	3	3	3
*Sound basis for choosing an occupation	*5	*5	*8
*Broad knowledge of the world of work	*4	*6	*9.5
Understanding of the decision-making process	6	4	4
Appreciation of democracy as a form of government	10	7	5
Preparation for family living	7	9	7
Adequate knowledge of physical and mental health	8	8	6
Subject matter mastery	9	10	9.5
Constructive use of leisure time	11	11	11
Appreciation of good music and literature	12	12	12

With the exception of "accurate knowledge of self", which was ranked highly prior to the workshop, two key objectives were rated higher by both experimental groups in comparison to the control group. These were "sound basis for choosing an occupation" and "broad knowledge of the world of work." The higher ranking of "broad knowledge of the world of work" by the Group A in comparison to Group B suggests a pretest sensitization effect may have occurred.

Nevertheless, all three items received a high ranking by the *experimental* teachers. This is significant in view of the subject matter orientation of the teachers.

Obviously these teachers felt that occupational education was an important educational objective, and that reaching this objective should have a significant "pay off" for society.

Importance of Questions About Occupations

Both the "Questions about Occupations" scale and the "Questions about Self" scale were designed to reflect change in understanding of modern concepts of occupational choice. Both scales require close discrimination related to choice and considerable knowledge of choice theory.

The starred items in Tables 3A, 3B, 3C and 3D are the key items relating to modern theory of occupational choice. A summative score of these items is noted at the bottom of each column and may be used as an overall index of the key items. Tables 3A and 3B show that both experimental groups rated key items higher on successive test administrations.

In Table 3A are shown the Q-sort values assigned to the 14 questions about occupations of experimental group A. Inspection of this table reveals that teacher ratings for all five "key" items changed in the predicted direction.

Table 3A

Experimental (Pre-Post-Final)
Responses to Importance of Questions About Occupations

		Mean Value	
	Pre	Post	Final
	(31)	(31)	(27)
1. What special training do I need for this field?	3.81	3.74	3.37
* 2. Do people work alone or in groups in this occupation?	*2.25	*2.29	*2.33
3. What starting salary can I expect?	2.25	1.79	1.96
4. Is this work especially dangerous?	1.32	1.26	1.30
* 5. Does this occupation involve working with people, data, or things?	*3.13	*3.19	*3.41
6. Is the work done in pleasant surroundings?	2.19	12.13	1.89
7. How long are the working hours?	1.34	1.23	1.33
8. What is the highest salary people can make in this occupation?	2.19	1.55	1.93
9. Is special equipment involved for this occupation?	1.00	1.42	1.56
*10. Is there much freedom for decision-making in this work?	*2.56	*3.10	*2.85
11. How much vacation time does the occupation provide?	.63	.65	.74
*12. Does this work involve lots of pressure or deadlines?	*2.25	*2.37	*2.37
13. In what part of the country would the work be?	1.25	1.55	.89
*14. Are people in this work closely involved with a finished product or a direct service?	*1.81	*2.06	*2.07
SUMMARY	12.00	13.01	13.03

Table 3B

Experimental (Post-test Only)

Responses to Importance of Questions About Occupations

	Mean Value		
	Pre	Post (31)	Final (25)
1. What special training do I need for this field?		3.65	3.24
* 2. Do people work alone or in groups in this occupation?		*2.26	*2.68
3. What starting salary can I expect?		1.87	1.56
4. Is this work especially dangerous?		3.26	1.36
* 5. Does this occupation involve working with people, data, or things?		*3.26	*3.16
6. Is the work done in pleasant surroundings?		2.03	2.04
7. How long are the working hours?		1.39	1.48
8. What is the highest salary people can make in this occupation?		1.68	1.64
9. Is special equipment involved for this occupation?		1.52	.96
*10. Is there much freedom for decision-making in this work?		*2.90	*3.04
11. How much vacation time does the occupation provide?		.68	.80
*12. Does this work involve lots of pressure or deadlines?		*1.84	*2.48
13. In what part of the country would the work be?		1.45	1.40
*14. Are people in this work closely involved with a finished product or a direct service?		*2.10	*12.16
SUMMARY		12.36	13.52

When comparing Table 3A against 3B, it is shown that for the post-only test, understanding of four of five concepts related to modern theory of occupational choice did increase, but the understanding of pressure and deadlines as related to working situations apparently was not made clear to these teachers. When the final test administration of the post-only group (Table 3B) is examined, an increase in mean value is shown (1.84 to 2.48) and reflects a better understanding of this item.

Table 3C shows that there was virtually no difference in summative scores (10.40 and 10.39) between the two test administrations given the control group. This further indicates the high reliability of this instrument.

Table 3C

Control

Responses to Importance of Questions About Occupations

	Time 1 (N=25) Value	Time 2 (N=26) Value
1. What special training do I need for this field?	3.68	3.46
* 2. Do people work alone or in groups in this occupation?	*1.72	*1.81
3. What starting salary can I expect?	2.28	2.58
4. Is this work especially dangerous?	1.56	1.50
* 5. Does this occupation involve working with people, data, or things?	*2.80	*2.46
6. Is the work done in pleasant surroundings?	2.20	1.96
7. How long are the working hours?	1.52	1.58
8. What is the highest salary people can make in this occupation?	2.00	2.08
9. Is special equipment involved for this occupation?	1.48	1.23
*10. Is there much freedom for decision-making in this work?	*2.84	*2.85
11. How much vacation time does the occupation provide?	1.52	1.12
*12. Does this work involve lots of pressure or deadlines?	*1.84	*1.85
13. In what part of the country would the work be?	1.48	2.12
*14. Are people in this work closely involved with a finished product or a direct service?	*1.20	1.42
SUMMARY	*10.40	*10.39

Looking at Tables 3C and 3D, it appears that participation in the educational program was associated with an increase in understanding of viewing occupations by the teachers. Additional support for this comes from the fact that such items "What starting salary do I get", "How long is the vacation period" were all rated as less important by the experimental teachers.

Table 3D

Comparison Experimental and Control

Final Test Responses to Importance of Questions About Occupations

	Mean Value		
	N=27 Group A	N=25 Group B	N=26 Group C
1. What special training do I need for this field?	3.37	3.24	3.46
* 2. Do people work alone or in groups in this occupation?	* 2.33	* 2.68	* 1.81
3. What starting salary can I expect?	1.96	1.56	2.58
4. Is this work especially dangerous?	1.30	1.36	1.50
* 5. Does this occupation involve working with people, data, or things?	* 3.41	* 3.16	* 2.46
6. Is the work done in pleasant surroundings?	1.89	2.04	1.96
7. How long are the working hours?	1.33	1.48	1.58
8. What is the highest salary people can make in this occupation?	1.93	1.64	2.08
9. Is special equipment involved for this occupation?	1.56	0.96	1.23
*10. Is there much freedom for decision-making in this work?	* 2.85	* 3.04	* 2.85
11. How much vacation time does the occupation provide?	0.74	0.80	1.12
*12. Does this work involve lots of pressure or deadlines?	* 2.37	* 2.48	* 1.85
13. In what part of the country would the work be?	0.89	1.40	2.12
*14. Are people in this work closely involved with a finished product or a direct service?	* 2.07	* 2.16	* 1.42
SUMMARY	*13.03	*13.52	*10.39

While it cannot be conclusively said that this finding is a *direct* result of the *workshops*, it is probably an indirect result of the participation and involvement in the educational laboratory's program.

Importance of Questions About Self

Results from administering the questionnaire "Importance of Questions About Self" are shown in Tables 4A, 4B, 4C, and 4D. Starred items are key items regarding occupational choice in relation to self. Summary scores are located at the bottom of the columns in the respective tables. These scores are the summation of the mean values of the key items and may be used as an overall index of the key items of this questionnaire.

Table 4A shows that there was an even split between items changing in the predicted direction and those changing in the opposite direction for pre and post tests. Final test responses showed an increase in six of eight key items from post to final test. Questions regarding decision-making and working closely with other people did not show an increase from post to final test.

Table 4A

Experimental (Pre-Post-Final)

Responses to Importance of Questions About Self

	N=31 Pre	Mean Rank N=31 Post	N=27 Final
* 1. Do I like to work under pressure and meet deadlines?	2.00	2.03	2.37
2. What are my special aptitudes?	3.68	3.81	3.74
* 3. Do I prefer to work alone?	1.84	1.77	1.85
4. What is my general ability level?	3.00	3.19	2.88
* 5. Do I like to work at my own pace without much pressure?	1.90	1.81	1.93
* 6. Do I like work where someone else makes most of the decisions?	1.87	1.68	2.04
7. What kind of salary should I seek?	1.77	1.84	1.41
* 8. Do I prefer to work closely with other people?	2.10	2.42	2.11
9. Can I stand a long training program?	1.06	.97	.81
*10. Do I like work which requires that I follow rules made by others?	1.06	1.55	1.59
*11. Does it bother me not to be able to see a finished product from my work?	1.68	1.77	1.52
12. How rapidly do I learn?	1.68	1.77	1.74
*13. Do I prefer to make my own decisions in my work?	2.40	2.20	2.37
14. How interested am I in science, social science or clerical activity?	1.45	1.42	1.59
SUMMARY	14.85	15.23	15.78

Comparing Table 4A with 4B, six of eight key items on the post-tests showed an increase in the predicted direction from pretest scores. Seven key items increased on the final administration. The item relating to being able to see a finished product decreased for both experimental groups and probably did not receive adequate attention in the workshops.

Table 4B

Experimental (Post-test Only)

Responses to Importance of Questions About Self

	Mean Rank		
	N=31 Pre	N=31 Post	N=27 Final
* 1. Do I like to work under pressure and meet deadlines?	(2.00)	*2.07	*2.57
2. What are my special aptitudes?		3.63	3.60
* 3. Do I prefer to work alone?	(1.84)	*1.63	*1.76
4. What is my general ability level?		2.93	2.88
* 5. Do I like to work at my own pace without much pressure?	(1.90)	*2.20	*2.24
* 6. Do I like work where someone else makes most of the decisions?	(1.87)	*1.63	*1.84
7. What kind of salary should I seek?		1.32	.96
* 8. Do I prefer to work closely with other people?	(2.10)	*2.20	*2.48
9. Can I stand a long training program?		1.13	.96
L*10. Do I like work which requires that I follow rules made by others?	(1.06)	*1.30	*1.48
*11. Does it bother me not to be able to see a finished product from my work?	(1.68)	*1.63	*1.44
12. How rapidly do I learn?		2.17	1.68
* 13. Do I prefer to make my own decisions in my work?	(2.40)	*2.60	*2.60
14. How interested am I in science, social science or clerical activity?		1.50	1.28
SUMMARY		15.26	16.41

The control group (Table 4C) was very similar in overall test scores on key items for the two administrations, with a slight decrease in overall score (14.03 to 13.91) on the second administration. This seems to indicate the high reliability of the instrument.

Table 4C

Control

Responses to Importance of Questions About Self

	Mean Rank	
	Time 1 (N=25)	Time 2 (N=26)
* 1. Do I like to work under pressure and meet deadlines?	1.88	2.35
2. What are my special aptitudes?	3.54	3.31
* 3. Do I prefer to work alone?	1.46	1.46
4. What is my general ability level?	3.23	3.31
* 5. Do I like to work at my own pace without much pressure?	1.88	1.65
* 6. Do I like work where someone else makes most of the decisions?	1.35	1.73
7. What kind of salary should I seek?	2.27	2.42
* 8. Do I prefer to work closely with other people?	2.00	1.96
9. Can I stand a long training program?	1.19	1.62
*10. Do I like work which requires that I follow rules made by others?	1.42	1.23
*11. Does it bother me not to be able to see a finished product from my work?	1.85	1.38
12. How rapidly do I learn?	2.19	1.92
*13. Do I prefer to make my own decisions in my work?	2.19	2.15
14. How interested am I in science, social science or clerical activity?	1.88	1.50
SUMMARY	14.03	13.91

Both experimental groups had higher overall scores on key items than the control group (Table 4D). Increases were smaller for the pretest group indicating some carry over effects on the attitude scales for this group. In conclusion, the workshops seemed to have a slight positive effect on viewing occupational choice in relation to self.

Table 4D

Comparison Experimental and Control

Final Test Responses to Importance of Questions About Self

	Group A (N=27)	Group B (N=27)	Group C (N=26)
1. Do I like to work under pressure and meet deadlines?	* 2.37	* 2.57	* 2.35
2. What are my special aptitudes?	3.75	3.60	3.31
3. Do I prefer to work alone?	* 1.85	* 1.76	* 1.46
4. What is my general ability level?	2.88	2.88	3.31
5. Do I like to work at my own pace without much pressure?	* 1.93	* 2.24	* 1.65
6. Do I like work where someone else makes most of the decisions?	* 2.04	* 1.84	* 1.73
7. What kind of salary should I seek?	1.41	1.22	2.42
8. Do I prefer to work closely with other people?	* 2.11	* 2.48	* 1.96
9. Can I stand a long training program?	0.81	0.96	1.62
10. Do I like work which requires that I follow rules made by others?	* 1.59	* 1.48	* 1.23
11. Does it bother me not to be able to see a finished product from my work?	* 1.52	* 1.44	* 1.38
12. How rapidly do I learn?	1.74	1.68	1.92
13. Do I prefer to make my own decisions in my work?	* 2.37	* 2.60	* 2.15
14. How interested am I in science, social science or clerical activity?	1.59	1.28	1.50
SUMMARY	*15.78	*16.41	*13.91

Crites Vocational Maturity Scale

A modified form of the Crites Vocational Maturity Scale was administered to experimental and control teachers in order to determine the degree of vocational maturity reflected by the teachers both at the beginning and termination of the project.

Using the 1, 0 weighting scheme as developed by Sheppard, the experimental and control teacher means are listed below in Table 5. It should be noted that control teachers received only one administration of the Crites Scale.

Table 5

Crites Vocational Maturity Scores

Experimental Group (Pre-Post-Final)

Pre	Post	Final
49.19	49.06	47.85

Experimental Group (Post-test Only)

Pre	Post (31)	Final (25)
......	47.68	49.76

Control Group

Time 1	Time 2 (26)
......	45.96

As would be expected of an instrument designed to measure relatively stable characteristics; no significant differences between experimental and control scores were noted. In fact, the comparability of the scores supports the use of this instrument as a basis for classifying teachers for purposes of subsequent analyses.

Work Cases

The work cases instrument was designed to reflect agreement on the part of subjects with the point of view represented by large employers. The items were classified according to attitude represented as follows:

Case I - Pride in accomplishment
Case II - Responsibility-dependability, loyalty to employer
Case III - Appreciation for quality
Case IV - Loyalty, responsibility and dependability
Case V - Loyalty, responsibility and dependability
Case VI - Appreciation for quality
Case VII - Loyalty
Case VIII - Life aspirations
Case IX - Personal satisfaction
Case X - Personal satisfaction

Responses to the items and shift in response are reflected in Table 6. Here it can be seen that the shifts were minor, although slight shifting did occur on items related to loyalty to employer. Total raw scores on the work cases instrument were as follows:

Pre test 46.93 Post-test 47.19 Post Only 49.38

Some pre test sensitization may have been present in the instrument as reflected by the difference in mean scores of the post-test only group and the other two sets of scores. Thus, the one week workshop experience was not associated with a significant shift toward attitudes advocated by large employers.

Manpower Attitudes

A change in the following items would be expected to follow an effective workshop:

3. Actually, whatever success I have in my work career depends pretty much on factors beyond my control.

6. If someone gave me all the money I needed, I'd never go to work.

7. I wouldn't care what my job was like, as long as the pay was high.

8. All honest work is worthwhile, and therefore all workers deserve respect.

9. Work is a necessary evil.

14. The only reason most people work is for the money.

16. Luck will play an important role in determining whether I get a good job.

20. People who really want to work can always find a job.

23. Young people need a lot more help in finding jobs than they are getting now.

25. Industry should hire high school graduates rather than dropouts.

Table 6

Reaction to Work Cases

	Key	%	(Wt)	Pre-test(N=31)		Post-test(N=30)		Post Only(N=31)	
				Raw Sc.	%	Raw Sc.	%	Raw Sc.	%
1	a	(36)	(3)	2	6	1	3	8	26
	b	(36)	(3)	26	84	26	87	16	51
	c	(28)	(2)	3	10	3	10	7	23
	d	(0)	(0)	0	0	0	0	0	0
2	a	(14)	(1)	8	26	3	10	9	20
	b	(8)	(0)	1	3	3	10	0	0
	c	(78)	(7)	22	71	24	80	22	71
	d	(0)	(0)	0	0	0	0	0	0
3	a	(18)	(1)	1	3	1	3	7	23
	b	(70)	(7)	19	61	16	53	15	48
	c	(0)	(0)	0	0	0	0	0	0
	d	(12)	(1)	11	36	13	47	9	29
4	a	(54)	(5)	5	16	5	17	9	29
	b	(16)	(1)	8	26	6	20	5	16
	c	(24)	(2)	10	32	10	33	10	39
	d	(16)	(1)	8	26	9	30	5	16
5	a	(54)	(5)	28	90	27	90	29	93
	b	(16)	(1)	3	10	3	10	2	7
	c	(24)	(2)	0	0	0	0	0	0
	d	(16)	(1)	0	0	0	0	0	0
6	a	(4)	(0)	0	0	0	0	1	3
	b	(80)	(8)	25	80	25	83	28	90
	c	(0)	(0)	3	10	2	7	0	0
	d	(16)	(1)	3	10	3	10	2	7
7	a	(44)	(4)	15	48	15	50	15	48
	b	(0)	(0)	1	3	1	3	0	0
	c	(14)	(1)	3	10	5	17	6	20
	d	(42)	(4)	12	39	9	30	10	32
8	a	(66)	(6)	13	42	12	40	24	77
	b	(10)	(1)	12	39	8	27	3	10
	c	(24)	(2)	6	19	10	33	3	10
	d	(0)	(0)	0	0	0	0	1	3
9	a	(56)	(5)	24	77	27	90	17	54
	b	(14)	(1)	0	0	0	0	2	7
	c	(30)	(3)	7	23	3	10	11	36
	d	(0)	(0)	0	0	0	0	1	3
10	a	(4)	(0)	0	0	0	0	2	7
	b	(96)	(9)	28	90	29	97	27	86
	c	(0)	(0)	2	7	1	3	2	7
	d	(0)	(0)	1	3	0	0	0	0

We would hope for a higher mean score for these items on the post-test. The means of these items on the pre test, the post-test, and the post only test are reported below:

Item	**Pre-Test X**	**Post-Test X**	**Post Only X**
3	3.312	3.000	3.387
6	3.250	3.323	3.452
7	3.500	3.258	3.617
8	3.406	3.580	3.419
9	3.156	3.161	3.613
14	2.687	2.677	2.774
16	3.806	2.839	2.710
20	2.406	2.258	2.710
23	3.000	2.968	3.129
25	2.000	1.903	1.710

Item 9: Work is a necessary evil.

	SA	A	N	D	SD*
RMEL pre test	3.1	9.8	3.1	37.5	46.9
8th grade pre test	7.5	13.6	12.9	26.2	40.0
RMEL post-test	3.3	6.5	0	51.6	38.7
8th grade post-test	8.4	14.8	14.8	28.7	33.6
RMEL post-test only	0	3.2	3.2	22.6	70.9

Item 14: The only reason most people work is for the money.

	SA	A	N	D	SD*
RMEL pre test	3.1	6.3	12.5	25.0	3.1
8th grade pre test	24.4	41.7	7.1	19.5	7.3
RMEL post-test	0	16.1	9.7	67.7	9.7
8th grade post-test	16.8	39.0	9.9	25.0	9.2
RMEL post-test only	0	12.9	12.9	58.1	16.1

Item 16: Luck will play an important role in determining whether I get a good job.

	SA	A	N	D	SD*
RMEL pre test	3.1	3.1	3.1	81.3	9.8
8th grade pre test	4.6	13.7	7.2	38.6	36.0
RMEL post-test	3.2	3.2	12.2	67.7	12.9
8th grade post-test	5.0	13.7	10.5	41.7	29.1
RMEL post-test only	0	16.1	12.9	54.8	16.1

Item 20: People who really want to work can always find a job.

	SA	A	N	D	SD*
RMEL pre test	12.5	50.0	6.25	28.1	3.1
8th grade pre test	26.9	35.1	7.0	22.9	8.0
RMEL post-test	9.7	41.9	16.1	29.0	3.2
8th grade post-test	22.5	34.1	7.0	28.3	8.2
RMEL post-test only	22.6	41.9	9.7	25.8	0

Item 23: Young people need a lot more help in finding jobs than they are getting now.

	SA*	A	N	D	SD
RMEL pre test	28.1	53.1	9.75	9.75	0
8th grade pre test	19.6	44.1	15.6	17.7	3.1
RMEL post-test	12.9	74.2	9.7	3.2	0
8th grade post-test	14.6	45.5	19.1	18.4	2.4
RMEL post-test only	29.0	54.8	16.1	0	0

Item 25: Industry should hire high school graduates rather than dropouts.

	SA	A	N	D	SD
RMEL pre test	0	37.5	28.1	31.3	3.1
8th grade pre test	34.6	36.0	18.2	13.3	3.3
RMEL post-test	0	32.3	25.8	41.9	0
8th grade post-test	31.0	40.6	16.9	9.9	1.6
RMEL post-test only	0	25.8	25.8	41.9	6.5

Item 3 is concerned with awareness of occupational alternatives and life aspirations. No significant change in this concept is evidenced from the pre to post-test. The RMEL workshop teachers, as a whole, however, scored significantly higher on this item than the 8th grade students.

Item 6 deals with desire to work. A slight change in the desired direction is evidence. This may be due to an insufficient ceiling since the scores on the item were high initially. Again the workshop teachers scored higher than the 8th grade students.

Item 7 covers appreciation for quality, personal satisfactions, dignity of work well done and pride in accomplishment. This item was scored slightly lower on the post-test and slightly higher on the post only test. The initial scoring on the pre test was quite high (average score-between SA and A). Again there was an insufficient ceiling. The workshop teachers scored higher and showed less variability than the 8th graders.

Item 8 taps dignity of work well done and desire to work. Little change in the wording of this item occurred from pre to post-test. The item was scored very high on the pre test. The 8th grade students also scored this item high but showed more variability than the workshop teachers.

Item 9 also measures desire to work and life aspirations. There was no change from pre to post-test, perhaps because of a pre test set which caused reluctance to change answers. The post only group scored significantly higher than the pre test group. The 8th grade students scored much lower than the teachers with much more variability.

Item 14 measures desire to work, dignity of work well done and pride in accomplishment. There was a slight increase in the scoring of this item. Since the item deals with perception of others and not personal goals, however, it may not be directly related to the effectiveness of the workshop. The 8th graders scored this item significantly lower than the teachers.

Item 16 deals with life aspirations. This item was scored lower by the post-test and post only group. Perhaps this concept was not stressed adequately in the workshop. This item was scored similarly by the 8th grade students.

Item 20 measures desire to work and life aspirations. There was little change from pre to post- test in the scoring of this item. Since the 8th graders scored this item higher than the teacher, it might again be concluded that the concept, life aspirations, was not brought out in the workshop.

Item 23 also deals with life aspirations and was one of the main points of the workshops. There was little change in the scoring of this item. The teacher scored higher on this item than the eighth graders also the former showed wide variability.

Item 25 again is mainly concerned with life aspirations. The scoring of this item decreased from pre to post and post only tests. The eighth grade students scored significantly higher on this item.

The workshop teachers' responses to remaining items of test as compared to the 8th grade students are listed in the following tables. In most cases the teachers scored higher initially and showed less variability than the students. The appropriate ends of the continuum are starred.

Item 1: A good reason for quitting a job is that you don't like the people you work with.

	SA	A	N	D	SD*
RMEL pre test	3.1	46.9	9.9	37.5	3.1
8th grade pre test	4.7	12.7	6.4	37.1	39.0
RMEL post-test	3.2	38.7	6.5	45.2	6.5
8th grade post test	9.6	26.6	8.2	31.6	24.0
RMEL post test only	9.7	38.7	3.2	35.5	12.9

Item 2: A married worker with a family should be paid more than a single worker even if both do exactly the same job.

	SA	A	N	D	SD*
RMEL pre test	0	3.1	3.1	56.3	37.5
8th grade pre test	7.9	11.1	5.1	39.0	34.9
RMEL post-test	0	0	3.2	61.3	35.5
8th grade post-test	6.6	9.2	7.6	36.8	39.8
RMEL post test only	0	3.2	0	38.7	58.1

Item 4: If a person plans his education and training carefully, he is almost sure to succeed in his job career.

	SA	A	N	D	SD*
RMEL pre test	12.5	53.1	12.5	21.9	0
8th grade pre test	45.6	38.2	3.6	10.2	2.4
RMEL post-test	0	6.5	9.7	61.3	22.4
8th grade post-test	37.1	47.7	4.6	9.8	.9
RMEL post test only	19.4	29.1	16.1	35.5	0

Item 5: Most employers are sincerely interested in the welfare of their workers.

	SA	A	N	D	SD*
RMEL pre test	6.2	75.0	9.8	9.8	0
8th grade pre test	16.3	53.0	13.7	14.9	2.0
RMEL post-test	3.2	80.7	9.7	0	3.2
8th grade post-test	12.8	53.8	17.1	13.5	2.8
RMEL post test only	19.4	51.6	16.1	12.9	0

Item 10: Most American workers are paid just about what they deserve.

	SA	A	N	D	SD*
RMEL pre test	0	3.1	21.9	68.8	6.3
8th grade pre test	14.5	37.5	7.2	25.9	15.0
RMEL post-test	0	16.1	22.6	54.8	6.5
8th grade post-test	10.9	45.0	11.4	20.7	12.0
RMEL post test only	0	12.9	19.4	38.7	29.0

Item 11: It's too early to start thinking about my life's work.

	SA	A	N	D	SD*
RMEL pre test	0	0	9.8	46.9	43.8
8th grade pre test	3.4	6.5	2.6	30.4	57.1
RMEL post-test	0	0	0	45.2	54.8
8th grade post-test	4.8	4.8	3.6	29.6	57.1
RMEL post test only	0	0	3.2	32.3	64.5

Item 12: It will be hard for me to find a good job.

	SA	A	N	D	SD*
RMEL pre test	0	0	9.8	75.0	15.6
8th grade pre test	4.8	11.8	17.4	45.3	20.7
RMEL post-test	0	0	0	77.4	22.6
8th grade post-test	4.3	18.4	25.1	36.0	16.2
RMEL post test only	0	6.5	0	48.4	45.2

Item 13: Most people who are unemployed are shiftless and lazy.

	SA	A	N	D	SD*
RMEL pre test	0	37.5	9.8	37.5	15.6
8th grade pre test	16.1	27.0	8.5	29.4	19.0
RMEL post-test	0	22.6	12.9	41.9	22.6
8th grade post-test	13.7	19.0	10.3	35.1	22.0
RMEL post test only	3.2	9.7	12.9	51.6	22.6

Item 15: "Taking it easy" on the job is all right as long as you don't get caught by the boss.

	SA	A	N	D	SD*
RMEL pre test	0	3.1	3.1	40.6	56.3
8th grade pre test	4.1	10.2	6.1	29.8	49.8
RMEL post-test	0	0	3.2	58.1	38.7
8th grade post-test	2.5	10.9	7.3	36.5	42.8
RMEL post test only	0	0	3.2	29.0	67.7

Item 17: Men ought to get higher pay than women even if both do exactly the same work.

	SA	A	N	D	SD*
RMEL pre test	0	3.1	6.3	56.3	34.3
8th grade pre test	6.0	8.2	5.6	28.0	35.2
RMEL post-test	0	3.2	3.2	64.5	29.0
8th grade post-test	4.1	6.6	7.8	25.7	55.8
RMEL post test only	0	0	0	25.8	74.2

Item 19: Married women with children under 15 should not hold a job.

	SA	A	N	D	SD*
RMEL pre test	3.1	18.8	18.8	53.1	6.3
8th grade pre test	20.4	23.0	9.1	28.0	19.6
RMEL post-test	6.5	12.9	22.6	48.4	9.7
8th grade post-test	15.7	22.5	13.8	52.7	15.2
RMEL post test only	0	25.8	16.1	35.5	22.6

Item 21: A worker who is a college graduate ought to be paid at least twice as much as a high school graduate.

	SA	A	N	D	SD*
RMEL pre test	6.3	9.8	21.9	62.5	0
8th grade pre test	10.9	22.8	13.8	34.9	17.5
RMEL post-test	0	16.1	19.4	58.1	6.5
8th grade post-test	12.1	30.1	18.2	28.8	10.9
RMEL post test only	3.2	12.9	25.8	35.5	22.6

Item 22: I think my chances of getting a good job will be a lot better than my father had.

	SA	A	N	D	SD*
RMEL pre test	3.1	68.8	9.8	15.6	3.1
8th grade pre test	24.1	35.1	15.6	18.3	6.8
RMEL post-test	6.5	74.2	9.7	6.5	3.2
8th grade post-test	27.8	36.3	15.2	14.8	6.0
RMEL post test only	25.8	41.9	19.4	12.9	0

Item 24: Women ought to be able to rise just as high in the world as men.

	SA	A	N	D	SD*
RMEL pre test	18.8	68.8	12.5	0	0
8th grade pre test	40.7	34.5	8.9	12.0	3.9
RMEL post-test	16.1	80.7	3.2	0	0
8th grade post-test	44.4	30.4	9.7	11.3	4.1
RMEL post test only	32.3	51.6	6.5	6.5	3.2

Opinions About Work

In keeping with the objectives of the project related to attitude change on the part of pupils, the 55-item instrument "Opinions About Work" was also administered to the teachers in the workshop. In terms of total score (4, 3, 2, 1 and 0 for favorable through unfavorable responses), the following mean values resulted:

Pre test 171.55 Post-test 172.58 Post only 182.58

As in some of the previous attitudinal measures, there is some evidence of pre test sensitization reflected in the scores. As noted earlier, relatively little shift in score occurred during the workshop, according to the total response pattern.

To determine whether shifts on the basis of individual items were associated with participation in the workshop, the item tabulation shown in Table 6 was made. In this table items have been classified according to the attitude toward work area associated with each item statement.

Inspection of Table 7 indicates that relatively consistent shifts in the predicted direction occurred on "adaptability" items, on items emphasizing "personal satisfaction from work," and on items dealing with the "dignity of work." Whereas shifts did occur on items in other areas, these were relatively random.

Preliminary Workshop Summary

1. Whereas the teachers in the workshop were favorable toward the integrated study approach to occupational education prior to the workshop they became more favorable to this approach after the workshop.

2. The relative ranking of educational objectives related to occupational education indicates that the teachers in the workshop regard this area as having extensive educational payoff for society.

3. Shifts toward increased importance of educational objectives related to occupational education were recorded on two of three of the objectives assessed by the measuring instruments used in the project.

4. Workshop participants showed some increase in their understanding of modern methods of viewing occupations as the result of the workshop.

Table 7

Reactions to Opinions About Work

Attitude Area		Item	MEAN RESPONSE		
			Pre	Post	Post Only
Life Aspirations	1.	Most successful people have worked hard.	4.19	4.13	
	13.	If a girl plans to get married she doesn't need to think about a vocation.	3.64	3.37	
	21.	If a person works hard he can reach a lot of his goals.	3.65	4.13	
	23.	A person should pick a career and stick with it for life.	2.94	2.93	
	39.	If you work hard enough you are pretty likely to succeed on a job.	4.00	3.93	
	40.	Having goals to strive for is pretty important to me.	4.48	4.32	
	*51.	Being happy in one's work is one of the most important goals in life.	4.39	4.43	
	*55.	A person who wants satisfaction from life will set at least a few goals to work toward.	4.23	4.50	
Adaptability	2.	No matter how much schooling a person has had he can still learn from his work.	4.52	4.47	
	24.	Once a person gets a good job, he doesn't need any more education.	3.74	3.47	
	*37.	Everyone should expect to keep learning from his work all through life.	4.45	4.32	
	*42.	I want a job that will allow me to learn lots from it.	4.00	4.07	
	*49.	A person should really try to keep learning even after he finishes school.	4.48	4.50	
Desire to Work	3.	The world would be a better place if people didn't have to work.	3.48	3.40	
	27.	No one can expect anyone to work really hard on a job.	3.29	3.10	
	30.	People who work hard on a job are only kidding themselves.	3.26	3.23	
	*31.	Most people would not work if they didn't have to do so.	2.81	3.07	
Personal Satisfaction	*4.	A person's attitude toward life is affected by whether or not he likes his work.	4.23	4.33	
	*5.	I want a job that I don't have to work at more than 40 hours a week.	1.87	2.10	

Table 7 (Continued)

Attitude Area		Item	MEAN RESPONSE Pre	Post	Post Only
	*6.	Working ought to be fun.	4.03	4.30	
	*7.	When someone likes the work he is doing his whole life is happier.	4.48	4.50	
	*10.	Work should be more than just something for which you receive pay.	4.39	4.40	
	*12.	It doesn't matter very much whether or not a person like his work.	3.39	3.50	
	*17.	People who work long hours must be very unhappy with their jobs.	2.32	3.03	
	26.	People who like their jobs would rather work than take a vacation.	2.36	2.33	
	29.	Everyone should try to find work they really like to do.	4.39	4.13	
	*33.	There is a lot of satisfaction in learning a job.	4.07	4.20	
	*36.	Most truly great men have liked their work.	4.10	4.21	
	41.	I don't care what I do as long as I am well paid.	3.16	3.04	
	45.	A worker cannot like a job unless he is well paid.	2.55	2.43	
	52.	The most important thing about any job is the money you get for doing it.	3.00	3.00	
Dignity of Work	*8.	I think it's a good idea for young people to have a part-time job.	3.97	4.17	
	*11.	A job has dignity in proportion to the quality of a worker's performance.	4.19	4.23	
	*18.	Even a ditch digger should be considered a success if he does his job well.	3.52	4.27	
	*32.	Happiness is doing a job well.	3.87	4.20	
	38.	Everyone owes it to himself to do the best job he can at everything he does.	4.32	4.32	
	*54.	Everyone should try hard to produce his best.	4.32	4.36	
Responsibility	9.	People are foolish if they do more than they are told to do on a job.	3.19	2.27	
	34.	It shouldn't matter to an employer if workers are a little bit late each day.	3.39	3.25	
	46.	People should work just as hard when the boss is gone as when he is present.	4.32	4.29	
Pride in Accomplishment	*14.	The work people do should help them feel useful.	3.95	4.30	
	28.	Doing something useful is pretty important in a job.	4.26	4.20	

Table 7 (Continued)

Attitude Area		Item	MEAN RESPONSE Pre	Post	Post Only
	43.	It is important to do a job right.	4.48	4.25	
	50.	Every employee should be proud of his work.	4.29	4.14	
Loyalty	*15.	Most employers are pretty good about giving workers time off from their jobs if there is a good reason.	4.00	4.07	
	35.	Most employers try to get workers to do more than they should.	2.81	2.75	
	44.	Most people who lose their jobs really can't help it.	3.00	3.00	
Appreciation for Quality	*19.	The better a business serves its customers, the longer that business is likely to last.	3.77	4.23	
	*20.	If a company is going to produce a good product, all workers must do their best at making it that way.	3.71	4.23	
	22.	If people do poor work on a job, they shouldn't be paid for it.	3.03	3.00	
	*25.	No matter what the job is, it should be done well.	3.87	4.27	
	47.	Workers should always try to do their best.	4.26	4.25	

* Indicates a shift in the predicted direction.

5. Teachers did not show increased insight into viewing occupational choice in relation to self as a result of the workshop.

6. A systematic effort must be made to improve experimental teachers' understanding of modern theories of vocational choice if this aspect of the project is to be achieved successfully.

7. Responses to the Crites Vocational Maturity Instrument were highly stable throughout the workshop. Scores on this instrument appear to provide a sufficiently reliable indication of vocational maturity to justify using this device to group teachers for subsequent analysis of changes in the attitudes of their pupils.

8. Workshop participants showed high stability in their interpretation of appropriate actions for employees in a variety of work situations. Reaction of the teachers paralleled recommended action of personnel managers relatively closely. Slight shifts toward the employers' points of view were noted during the workshop.

9. Although generalized attitude toward work remained relatively stable during the workshop, positive shifts were noted on specific items related to adaptability, personal satisfaction from work, and dignity of work well done.

10. The workshop teachers showed more insight and less variability on the objectives of vocational education than the 8th grade students tested. Since the initial scoring was quite high, only slight shifts were noted during the workshop. Changes in desire to work and dignity of work well done were most important.

11. Some pre test sensitization on the attitude scales was noted. Expressions of attitude prior to the workshop tended to solidify responses and results in smaller shifts than would be expected from the responses of workshop participants.

12. Evidence obtained from informal inspection of lesson plans prepared by workshop participants suggests that the teachers developed considerable skill in identifying vocational education implications from subject matter materials. The development of a device should be administered after the teachers have had several weeks experience in the project. Scores from this device will permit meaningful classification of the teachers for subsequent analyses of changes in attitudes of their pupils.

FINAL WORKSHOP SUMMARY COMMENTS

1. The experimental groups of teachers rated the integrated study approach higher than the control teachers. Participation in the Cheyenne Workshop, the three conferences, and the working relationships with the professional staff of the Rocky Mountain Educational Laboratory had a favorable effect on attitudes to the integrated study approach of presenting occupational information.

2. Favorable reactions to the integrated study approach remained highly stable over the ten-month interval between post and final tests.

3. Comparison between experimental and control teachers on Final test administration indicates the Laboratory's influence on the importance of key educational objectives emphasized in the program. Experimental teachers ranked 2 of 3 key objectives higher than control teachers on Final test administration.

4. Summative scores showed that experimental groups A and B rated key items as more important than the control group.

5. Participation in the world of work program was associated with an increase in understanding of viewing occupations by the teachers.

6. Responses to importance of questions about self indicated that both experimental groups had higher overall scores on key items than the control group. Program involvement seemed to have a slight positive effect on viewing occupational choice in relation to self.

7. Responses to the Crites Vocational Maturity Instrument were highly stable throughout all test administration. Differences between experimental and control groups were slight. Scores on this instrument appear to provide a sufficiently reliable indication of vocational maturity to justify using this device to group teachers for subsequent analysis of changes in the attitudes of their pupils.

8. Workshop participants showed high stability in their interpretation of appropriate actions for employees in a variety of work situations. Reaction of the teachers paralleled recommended action of personnel managers relatively closely. Slight shifts toward the employers' points of view were noted during the workshop.

9. Although generalized attitude toward work remained relatively stable during the workshop, positive shifts were noted on specific items related to adaptability, personal satisfaction from work, and dignity of work well done.

10. The workshop teachers showed more insight and less variability on the objectives of vocational education than the 8th grade students tested. Since the initial scoring was quite high, only slight shifts were noted during the workshop. Changes in desire to work and dignity of work well done were most important.

11. Some pre-test sensitization on the attitude scales was noted. Expressions of attitude prior to the workshop tended to solidify responses and results in smaller shifts than would be expected from the responses of workshop participants.

12. High reliability is shown for all instruments by the comparability of scores of control teachers.

13. Differences between experimental and control groups were evidenced throughout all instruments and tends to support the positive effect of Rocky Mountain Educational Laboratory on attitudes of teachers.

LESSON PLANS: DEVELOPMENT AND PHILOSOPHY

The use of lesson plans in the RMEL program was a means by which teachers were provided a framework to plan lessons for the integration of work-related attitudes and information with existing curriculum. The aim was not to have language arts and social studies teachers change anything within the content of what was already being taught, but rather for the teachers to emphasize work- related concepts and attitudes into their present lesson plan format.

In order to facilitate the development of a lesson plan format which was mutually acceptable to participating teachers and the RMEL staff; conferences and workshops were held throughout the school year. In summary, the objectives of these workshops were as follows:

1. To demonstrate the compatability between cognitive learnings and Image of the World of Work experiences.
2. To expand the purview of teachers and resource consultants with regard to attitudes and values in relation to the World of Work.
3. To continue to develop and adopt a lesson plan format acceptable to both participating teachers and RMEL staff.
4. To collect data for analysis of program impact.

The Cheyenne Workshop, held during August, 1968 was the starting point for participating teachers in the development of an effective lesson plan format. During the workshop, ten attitudes which may contribute to the success of an individual in the World of Work were discussed. These attitudes were part of what was called the 'input objectives'. Throughout the school year, the lesson plan went through a series of revisions recommended by the RMEL staff and participating teachers. It was essential that RMEL develop a lesson plan that was both simple and flexible for the teachers, and one that could provide the necessary data which RMEL desired. In the final revision of the lesson plan format, the teacher described the content objectives and lesson features, noted the teacher activities and student tasks which were used, evaluated the attitudinal elements of the lesson, and rated the overall effectiveness of the lesson plan. The lesson plan revisions are seen in Appendix I.

Because the lesson plan format stressed essentially attitudinal objectives of the program of the Image of the World of Work, selected essays concerning occupational information were developed at this point as part of the RMEL strategy for providing informational as well as attitudinal inputs to participating teachers.

This series of six essays pertains to modern ways of viewing occupations and theories of occupational choice and was adapted in terms of language and content for seventh graders.

The occupational essays were developed by the Human Factors Research Laboratory of Colorado State University, Fort Collins, Colorado. These essays were sent, along with exemplary lesson plans received by RMEL, to the participating teachers in the latter part of the school year.

Workshops were held in three locales in the spring of 1969 in order to discuss the use of the essays in the classroom and the application of the theories involved. An evaluation form regarding the essays was also given to the teachers at this time. The essays and the results of the evaluation are seen in Appendix II.

LESSON PLANS: CRITERIA FOR RATINGS

Due to the extreme variety of lesson plans which were submitted to the Rocky Mountain Educational Laboratory, the problem of devising suitable criteria for evaluation was a difficult one.

After numerous discussions and examinations of various criteria, a 3-point rating scale and accompanying evaluation model was decided upon.

It was felt that for a lesson plan to receive an excellent rating, it was necessary for the teacher to integrate (a) attitudinal input related to the world of work *and* (b) work-related informational input. The use of *either* (a) or (b) was considered to be a satisfactory lesson plan. When *Both* attitudinal concepts related to work situations and job related information were integrated into the lesson plan, the lesson plan was given an excellent rating.

If there was no implication of attitudinal or occupational input related to a work context, the lesson plan was given an unsatisfactory rating. A large number of teachers received an unsatisfactory rating on their lesson plans due to the fact that they planned or described an attitude without relating it to a work-oriented situation. The use of attitudes per se, out of a work context, was considered to be unsatisfactory in terms of the project's goals.

Thus, in summary form, the rating schema are as follows:

(1) *Unsatisfactory Lesson Plan-* No implications of attitudes or job related information.

(2) Satisfactory Lesson Plan - Lesson includes *either* job attitudinal input or job informational input

(3) *Excellent Lesson Plan-* Integration of *both* job information and job attitudes.

Lesson plans were ranked independently by five staff members of the Rocky Mountain Educational Laboratory. After this was completed, all raters met to re-examine each lesson. If there were any large discrepancies among the raters, the lesson plan was re-examined and an agreement on the rating was made.

The number of lesson plans developed by each teacher, and the mean ratings for each teacher are presented in Table 1. Table 1 also includes summary statistics for the total teacher population. These are the mean number and standard deviation of the lesson plans produced by each teacher, the mean rating, and the correlation between the number of lesson plans and lesson plan ratings. It should be noted that since the total number of experimental teachers (67) did not develop lesson plans, the N was reduced to 53.

Table 8

LESSON PLAN TEACHER RATINGS

Teacher	N	Mean Rating
1	1	3.00
2	1	2.00
3	8	2.50
4	10	1.50
5	6	1.00
6	15	1.40
7	8	1.88
8	5	1.20
9	3	1.00
10	16	1.88
11	15	1.60
12	21	1.29
13	3	1.33
14	3	1.66
15	4	2.00
16	3	1.33
17	2	1.00
18	4	1.75
19	8	2.00
20	6	1.83
21	3	1.70
22	9	2.00
23	4	1.50
24	2	1.00
25	5	1.00
26	9	1.67
27	2	1.50
28	12	1.42
29	4	1.75
30	2	1.00
31	2	1.00
32	3	1.00
33	9	1.44
34	7	1.71

35	2	1.50
36	2	1.00
37	2	1.50
38	9	2.00
39	5	1.20
40	2	1.00
41	1	1.00
42	1	3.00
43	4	1.00
44	1	2.00
45	1	3.00
46	15	1.40
47	15	1.40
48	6	1.00
49	5	1.00
50	2	1.00
51	3	1.33
52	9	1.33
53	2	2.50

Mean number of lesson plans per teacher = 5.70

Lesson plan Standard Deviation = 4.70

Mean lesson plan rating = 1.53

Correlation between number of lesson plans and lesson plan ratings = -.04

LESSON PLANS: DISCUSSION & RECOMMENDATION

From Table 8, it can be seen that there was a great range in the number of lesson plans submitted by participating teachers (mean 5.70 and standard deviation 4.70). It is also seen that teachers exhibited a wide range in their ability to develop lesson plans.

The overall lesson plan rating of 1.53 would be placed on a continuum between a satisfactory and unsatisfactory rating. This relatively low rating may be due to a number of factors.

First, although it was essential to stress the importance of attitudes in the workshops, there did not seem to be enough emphasis placed on discussing these attitudes in the context of work situations. It is generally found by most researchers that attitudes are situational, that is, what may be regarded as a strong or positive attitude in one situation may be either absent or negative in another situation. Thus the meaningfulness of discussing attitudes is lessened greatly when taken out of a situational frame of reference-in this case the job environment.

This attitudinal emphasis resulted in a misperception on the part of participating teachers of what was expected of them in the development of a lesson plan. Hence in many lesson plans, teachers simply described students' attitudes and changes in attitude (i.e. more cooperative, greater desire to work) without any reference to an external job situation. This was not satisfactory according to the rating system discussed in the previous section.

Another factor which may have resulted in the low overall rating was the apparent lack of adequate feedback to the teachers as to the quality of the lesson plans they had completed and forwarded to the laboratory. Emphasis was placed on the number of lesson plans produced and the ability to fill out the lesson plan format correctly rather than the effectiveness and quality of the lesson plan itself. This probably accounted for the lack of correlation (-.04) between the number of lesson plans produced and lesson plan ratings. Thus the teacher who produced a large number of lesson plans had no better idea of what a superior lesson plan was than one who submitted a few lesson plans. The criteria for evaluating lesson plans were implemented *after* lesson plans were submitted. In future programs of this type, evaluation procedures and criteria should be set up prior to lesson plan development and should be communicated to participating teachers.

Although no statistical evidence was available, an examination of lesson plans following the insertion of occupational essays indicated that the use of occupational essays into the RMEL program seemed to have a positive effect on lesson plan ratings. Teachers seemed better equipped to apply a situational framework to their lesson plans, thus lesson plans were more meaningful and had higher ratings.

RMEL TEACHER STUDY

CHANGES IN PUPIL SCORES IN RELATION TO CHARACTERISTICS OF THEIR TEACHERS

The major purpose of the present project was to determine the appropriateness of integrating occupational information and work attitudes into the curricular content of language arts and social studies at the seventh grade level. Such a purpose implies the ability of subject matter teachers at the seventh grade level to identify suitable concepts from their area on which to base their presentations, as well as to make the presentations in a meaningful manner. It can be reasonably hypothesized that teachers differ in these characteristics just as they do on most other psychological facets of behavior. To assess the extent of differences among teachers in the project with respect to change in their pupils during the experimental period, the pretest and final mean scores on two instruments, Opinions About Work and Work Cases, were computed. In scoring the Opinions About Work inventory, three scores were obtained: Opinions About Pay, Values of Work, and Total Score for all items. The single total score already described was computed for the Work Cases. To assure that *only* those pupils who responded to each instrument *twice* were included in the computations, all pupils who responded only once (either first or second administration) were eliminated from the analyses. Thus, the teacher and her pupils in the experimental group became the sampling units in the computations of this type.

The 67 experimental teachers for whom complete scores were available for their pupils are listed by coded number in Table 9 . Inspection of this Table reveals that the mean score of every group of pupils increased between the two administrations, but that differences in gain as well as variations in both initial and second administration scores are extensive. When the mean change in pupil scores was tested for statistical significance using a correlated t test, it was found that changes associated with each of the four scores were statistically significant.

Table 9

____
Teacher's Name

IMAGE OF THE WORLD OF WORK - CHANGES IN PUPIL SCORES DURING YEAR

In the following columns the mean pretest scores (fall administration) and the mean final scores (spring administration) obtained by the pupils of each teacher are shown. Computations are based on only those pupils who participated in both the fall and spring administrations. In each instance the higher the score the more favorable the attitude represented.

Teacher Number	Opinions About Pay Score		Values of Work Score		Total Attitude Score		Work Cases Score	
	Pretest	Final	Pretest	Final	Pretest	Final	Pretest	Final
1	10.6	10.9	32.0	32.8	107.1	109.7	42.3	43.4
2	10.1	10.7	31.8	33.6	104.6	110.4	40.9	43.2
3	10.3	11.1	29.4	32.3	99.7	109.1	41.1	44.9
4	9.4	9.7	29.7	30.8	99.7	103.4	44.7	46.3
5	10.2	10.2	31.1	31.1	104.6	104.6	43.0	43.3
6	10.5	10.9	33.2	34.7	107.6	112.0	41.9	43.5
7	10.4	10.4	32.2	32.2	104.9	104.9	44.4	45.2
8	10.0	10.3	31.7	32.5	104.6	107.6	42.8	44.0
9	9.5	9.8	30.5	31.6	100.8	104.4	44.6	46.2
10	12.1	11.5	29.3	33.2	97.5	110.4	39.4	44.2
11	9.7	12.2	27.7	34.7	92.4	116.0	33.4	41.2
12	9.1	10.5	26.9	31.0	92.7	106.8	36.3	42.6
13	10.2	10.4	32.2	33.4	104.0	107.5	42.6	44.1
14	10.0	10.5	32.5	33.9	104.3	108.7	41.1	42.8
15	9.7	10.3	30.5	32.5	100.3	106.9	41.8	44.6
16	10.0	11.1	32.5	35.9	104.3	115.1	40.0	44.2
17	10.3	11.2	32.9	35.7	106.1	114.7	40.1	43.2
18	9.8	10.4	30.3	32.1	101.0	107.1	41.0	43.4
19	9.0	9.8	27.1	29.4	90.3	98.3	38.5	42.0
20	9.4	10.5	27.0	29.9	90.4	100.2	39.8	44.2
21	10.7	11.2	28.0	30.0	96.2	102.6	38.3	40.9
22	9.8	10.8	27.8	30.5	94.3	103.2	39.4	43.1
23	13.4	14.2	32.6	34.5	113.6	120.1	37.8	38.8
24	12.9	12.9	32.7	32.7	114.1	114.1	42.3	42.3
25	12.4	12.7	32.4	33.3	110.1	113.1	40.1	41.6
26	12.6	16.8	27.3	36.3	94.3	125.8	32.8	39.4
27	11.2	11.9	32.4	34.4	107.3	114.0	37.0	39.3
28	10.7	14.0	28.8	37.6	94.6	123.7	27.2	35.6
29	12.8	13.5	32.8	34.6	111.3	117.7	37.7	39.3
30	12.5	13.0	32.2	33.5	110.5	115.0	39.3	40.8
31	9.0	13.5	20.0	30.0	73.3	110.0	28.7	43.0
32	10.7	11.3	30.7	32.7	102.2	108.7	42.5	45.6
33	13.1	14.2	36.3	39.1	118.1	127.2	38.3	41.2
34	10.3	11.2	31.8	34.6	102.9	112.0	41.9	45.6
35	10.1	10.5	30.8	32.0	101.4	105.4	43.7	45.5
36	11.5	11.8	34.4	35.4	111.5	114.6	42.1	43.3

Teacher Number	Opinions About Pay Score		Values of Work Score		Total Attitude Score		Work Cases Score	
	Pretest	Final	Pretest	Final	Pretest	Final	Pretest	Final
37	9.1	9.1	30.8	30.8	91.1	91.1	42.8	42.8
38	12.6	13.9	31.9	35.1	106.1	116.7	42.0	42.0
39	12.0	12.0	35.6	35.6	115.7	115.7	42.1	42.1
40	10.1	10.7	30.9	32.7	101.0	107.0	39.0	41.3
41	7.9	9.0	27.9	31.9	89.0	101.7	36.9	42.2
42	9.1	9.6	29.0	30.6	95.0	100.2	41.4	43.7
43	10.9	11.3	31.5	32.8	102.9	106.9	39.8	40.8
44	9.3	10.9	27.7	32.5	92.2	108.2	34.6	40.7
45	9.5	9.8	29.6	30.4	97.9	100.8	43.1	44.5
46	10.0	10.5	26.9	28.3	94.5	99.4	42.5	44.7
47	9.7	11.5	31.0	36.7	99.8	118.2	34.7	42.2
48	11.0	12.3	31.4	35.2	103.6	115.9	36.6	41.0
49	10.3	11.1	29.3	31.6	102.0	110.1	37.0	40.6
50	10.6	10.9	30.8	31.8	105.9	109.0	40.2	42.2
51								
52	11.9	13.1	28.7	32.9	99.2	112.9	35.0	39.7
53	9.9	11.2	27.3	30.9	93.5	106.0	38.4	43.6
54								
55	9.6	10.9	27.5	31.4	92.7	106.0	37.6	43.0
56	11.0	11.6	29.6	31.0	101.9	106.8	40.6	42.6
57	9.1	10.8	24.6	29.2	86.1	101.9	36.6	43.5
58	7.1	8.6	24.2	29.3	82.5	99.9	39.6	41.8
59	9.6	10.4	31.9	34.4	102.2	110.3	41.7	45.0
60	9.2	9.8	28.8	30.6	95.1	101.2	46.2	49.7
61	7.1	8.6	24.2	29.3	82.5	99.9	34.6	41.8
62	9.5	10.0	30.4	31.6	99.1	103.2	45.0	47.8
63	9.3	10.1	30.1	32.7	97.9	106.0	43.6	47.2
64	10.0	11.1	28.2	31.4	94.5	105.0	40.8	45.4
65	10.4	11.7	29.7	33.5	99.4	112.2	43.3	47.3
66	11.2	12.0	29.2	33.3	99.9	107.3	42.2	45.3
67	11.0	12.7	30.2	34.7	100.7	115.8	41.4	46.4

To determine the relationship between the characteristics of individual teachers and the gain made by the pupils, eighteen teacher characteristics were defined as follows:

SEX-Male. Female

SUBJECT MATTER AREA-Language Arts, Social Studies, or Both

INTEGRATED STUDY-rated first, rated other than first

INTEGRATED STUDY SHIFT

EDUCATIONAL OBJECTIVES

EDUCATIONAL OBJECTIVES SHIFT

IMPORTANCE OF OCCUPATION

IMPORTANCE OF OCCUPATION SHIFT

IMPORTANCE OF SELF

IMPORTANCE OF SELF SHIFT

WORK CASES

WORK CASES SHIFT

OPINIONS ABOUT WORK

OPINIONS ABOUT WORK SHIFT

CRITES VOCATIONAL MATURITY

CRITES VOCATIONAL MATURITY SHIFT

LESSON PLAN

OVERALL SCORE

OVERALL SCORE SHIFT

To divide the teachers according to their distribution of raw scores on the Opinions About Pay, Values of Work, Opinions Total, Work Cases, and other Inventories listed below, arrays for each distribution of scores were made and divisions encompassing approximately one third of the total distribution were made. For each of the inventories the following divisions were used, and are seen in Table 10 below.

TABLE 10

Inventory	Low Group Code (1)	Intermediate Group Code (2)	High Group Code (3)
Importance of Educational Objectives	18-26	13-17	7-12
Importance of Occupation	5-11	12-13	14-17
Importance of Self	10-14	15-16	17-23
Work Cases	34-46	47-52	53-57
Opinions About Work	120-164	165-183	184-206
Crites	28-47	48-51	52-55
Lesson Plan	1.00-1.30	1.40-1.70	1.80-3.00

For the Overall Change dimension, the coded values were averaged across all characteristics and a new array was formed. This array was divided into three segments in a manner similar to that used to form the other categories.

To test the significance of pupil changes in score in relation to the characteristics of their teachers, the analysis of covariance, single classification with one control variable was computed for each characteristic. The mean final administration score was used for the criterion and the mean initial administration score was used as the control variable. In total, 76 analyses of covariances were computed. The numbers in the subgroups, the initial mean scores, the adjusted final mean score, the F-values and the levels of significance were assembled in tables and are shown in Tables 11 to 20. Table 21 summarizes the five highest and lowest F-values for each of the 4 areas.

TABLE 11

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH SEX OF TEACHER AND SUBJECT TAUGHT

	Male (21)		Female (27)			English (25)		Social Studies(15)		Both (8)		
AREA	PRE	FINAL	PRE	FINAL	F 1,45	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44
PAY	10.03	10.83	10.14	10.85	.02	10.37	10.93	9.69	10.82	10.00	10.62	1.01
VALUE	29.70	32.49	30.23	32.53	.01	30.04	32.82	29.85	32.42	30.16	31.74	2.05
TOTAL	98.83	107.63	99.44	107.59	.00	99.06	108.67	98.59	107.07	100.64	105.30	1.73
WORK CASES	40.47	43.74	40.21	43.39	.74	39.66	43.47	40.98	43.99	41.20	42.95	1.60

Table 11 presents pretest and adjusted final pupil scores in four areas associated with the sex of the teacher and the subject matter being taught. None of the areas revealed significant shifts in pupil scores associated with these teacher characteristics. This indicates that the sex of the teacher and the subject matter are not important teacher characteristics in terms of program objectives.

TABLE 12

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH TEACHER RANKING OF THE VALUE OF INTEGRATED STUDY

AREA	(14) Int. Study 1st		(34) Int. Study Other			(11) Int. Study Down		(27) Int. Study Same		(10) Int. Study Up		
	PRE	FINAL	PRE	FINAL	F 1,45	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44
PAY	9.84	10.76	10.20	10.88	.47	9.80	10.91	10.19	10.76	10.18	10.99	.72
VALUE	29.64	32.19	30.15	32.65	1.10	29.34	32.55	30.21	32.42	30.15	32.73	.18
TOTAL	98.12	106.39	99.61	108.11	1.31	97.30	107.61	99.67	107.61	99.90	108.25	.12
WORK CASES	40.73	43.67	43.49	43.49	.15	40.50	44.13	40.76	43.46	39.98	43.13	1.51

Table 12 shows pupil scores in four areas in relation to teacher scores and shifts on the Integrated Study Test. Teachers were dichotomized into those who ranked Integrated Study first, and those who did not. Teachers were also categorized into those who shifted up, down, and those who kept the same ranking on the test-from pretest to final administration. Since no scores were found to be significant, teacher's perceptions of the importance of integrated study had little effect on student scores on the tests.

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TABLE 13

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH TEACHER RANKING OF EDUCATIONAL OBJECTIVES

	(11) Ed. Obj. Low		(21) Ed. Obj. Aver.		(16) Ed. Obj. Hi			(20) Ed. Obj. Down		(7) Ed.Obj. Same		(21) Ed.Obj. Up		
AREA	PRE	FINAL	PRE	FINAL	PRE	FINAL	F2,44	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44
PAY	10.24	10.62	10.15	10.99	9.92	10.81	1.71	10.11	10.84	9.56	11.18	10.26	10.74	1.77
VALUE	31.15	32.44	29.60	32.73	29.72	32.28	.51	29.99	32.55	28.71	33.08	30.43	32.30	.84
TOTAL	101.40	106.77	98.24	108.57	98.86	106.90	.76	99.04	107.61	95.61	109.59	100.43	106.95	.77
WORK CASES	40.71	43.17	40.00	43.79	.73	40.28	.73	40.28	43.39	39.59	44.92	40.62	43.23	* 4.79

A significant shift in pupil scores on the Work Cases Instrument in relation to teacher shifts on ranking of Importance of Educational Objectives is seen in Table 13. Pupil scores on Work Cases increased to a greater extent for those teachers who did not shift in their ranking from pretest to final administration. Since pupils of teachers who ranked Educational Objectives higher did not have significantly higher scores than teachers with low or average rankings, the significant F affords no logical interpretation.

TABLE 14

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH TEACHER SCORES ON OPINIONS ABOUT WORK SCALE

	(14) Op. Wk. Low		(16) Op.Wk. Av.		(15) Op.Wk. Hi			(9) Op. Wk. Dn.		(3) Op. Wk. Same		(12) Op. Wk. Up		
AREA	PRE	FINAL	PRE	FINAL	PRE	FINAL	F2,41	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,20
PAY	10.14	11.04	9.80	10.64	10.38	10.98	2.50	10.30	10.94	9.67	10.66	10.23	10.99	.33
VALUE	30.13	32.98	30.16	32.09	30.09	32.81	1.96	29.69	32.38	30.13	31.73	30.74	32.91	.71
TOTAL	99.69	108.93	99.69	106.10	99.25	108.74	1.74	98.81	107.57	99.73	105.27	101.87	109.89	.69
WORK CASES	40.06	43.92	41.04	43.09	39.95	43.63	1.31	40.83	43.96	41.97	43.35	40.22	43.44	.34

Pupil scores in four areas showed no significant changes in relation to teacher scores on the Opinions about Work scale since the Opinions about Work scale was designed to reflect mature or immature want attitudes, it is likely that many of the teachers' work attitudes did not affect student scores.

One possible explanation for the lack of significant shifts in Table 14 is that student scores for all areas had a very narrow range, limiting possibilities for significance.

TABLE 15

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH TEACHER SCORES ON THE CRITES VOCATIONAL MATURITY TEST

	(11) CVM Low		(23) CVM Aver.		(14) CVM Hi			(18) CVM Down		(7) CVM Same		(23) CVM Up		
AREA	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44	PRE	FINAL	PRE	FINAL	PRE	FINAL	F2,44
PAY	10.04	10.86	10.10	10.83	10.13	10.86	.02	9.83	10.61	9.66	10.70	10.44	11.07	* 4.24
VALUE	29.64	32.35	30.17	32.59	30.01	32.51	.11	30.22	31.94	30.23	32.24	29.76	33.05	* 3.90
TOTAL	98.66	107.13	99.53	107.65	98.98	107.91	.08	99.05	105.28	99.54	106.60	99.16	109.74	** 5.61
WORK CASES	40.54	43.83	39.38	43.00	41.71	44.20	3.58*	41.07	43.21	41.73	43.45	39.32	43.83	.95

Table 15 shows that for those teachers who showed an increase on the Crites Vocational Maturity Test from pre to post test, there was a corresponding increase in pupil scores in the Pay subscale, Value of Work subscale, and total score on Opinions about Work. Significant F values are seen in these areas. Also, high pupil scores on the Work Cases were associated with high teacher scores on the Crites Vocational Maturity Test.

TABLE 16

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH TEACHER SCORES ON THE WORK CASES INSTRUMENT

AREA	(17) Wk. Cases Low		(16) Wk. Cases Av.		(15) Wk. Cases Hi			(9) Wk. Cases Down		(7) Wk. Cases Same		(8) Wk. Cases Up		
	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,20
PAY	10.57	10.72	9.93	10.92	9.73	10.90	.66	10.34	11.02	10.07	10.96	10.11	10.78	.34
VALUE	30.98	32.28	29.86	32.86	29.03	32.41	.80	30.98	33.13	29.54	32.31	30.11	32.14	.85
TOTAL	102.33	107.19	98.66	108.67	96.14	106.95	.60	102.90	110.06	98.37	107.40	99.52	106.34	1.08

Table 16 shows there were no significant shifts in pupil scores on the three areas associated with teacher scores on the Work Cases Instrument. Since the range of scores used to categorize teachers was small, it would be difficult to expect significant differences in these areas.

TABLE 17

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH TEACHER SCORES ON THE IMPORTANCE OF QUESTIONS ABOUT SELF INSTRUMENT

AREA	(6) Imp. Self Low PRE	FINAL	(23) Imp. Self Av. PRE	FINAL	(19) Imp.Self Hi PRE	FINAL	F 2,44	(13) Imp.Self Down PRE	FINAL	(8) Imp. Self Same PRE	FINAL	(27) Imp. Self Up PRE	FINAL	F 2,44
PAY	9.42	10.65	10.48	10.79	9.85	10.96	.94	9.98	10.66	10.52	10.98	10.02	10.89	1.09
VALUE	28.93	31.67	30.43	32.59	29.81	32.69	1.34	30.01	32.43	30.32	32.48	29.89	32.56	.04
TOTAL	95.43	104.59	100.55	108.00	98.68	108.08	1.36	99.36	107.23	101.28	107.88	98.46	107.71	.06
WORK CASES	41.52	43.59	40.14	43.46	40.17	43.63	.08	40.72	43.74	40.74	43.37	40.01	43.49	.21

Teacher scores on Importance of Questions about Self showed no relation to pupil scores in the four areas exhibited in Table 17. High scores on Importance of Self are illustrative of modern occupational choice theory.

The absence of any significant shifts in pupil scores is indicative of the teacher's and pupil's lack of familiarity with many of these newer concepts of occupational choice.

TABLE 18

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH TEACHER SCORES ON THE IMPORTANCE OF QUESTIONS ABOUT OCCUPATIONS INSTRUMENT

	(15) Imp. Occ. Low		(21) Imp. Occ. Av.		(12) Imp. Occ. Hi			(22) Imp.Occ.Down		(14) Imp.Occ.Same		(12) Imp. Occ. Up		
AREA	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44
PAY	10.19	10.66	10.22	10.96	9.75	10.87	1.36	10.31	10.88	9.66	10.70	10.22	10.95	.72
VALUE	30.57	32.14	30.24	32.68	28.87	32.69	.80	30.45	32.62	29.86	32.12	29.32	32.77	.88
TOTAL	99.51	106.13	100.80	108.43	95.91	108.02	1.09	100.52	108.12	97.88	105.85	98.22	108.72	1.45
WORK CASES	41.49	43.47	39.79	43.13	39.82	44.36	3.42*	40.77	43.78	40.62	43.08	39.17	43.66	1.16

In Table 18, a significant F-value of 3.42 indicates that teachers who scored highest on Importance of Questions about Occupations had significantly higher pupil scores on the Work Cases Instrument. Higher shift in pupil scores associated with total scores of Opinions about Work was associated with teachers who increased their Importance of Questions about Occupational Score from pre to post, although this was not statistically significant.

TABLE 19

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH QUALITATIVE EVALUATIONS OF TEACHER LESSON PLANS

AREA	(14) Les. Plan Low PRE	FINAL	(11) Les. Plan Aver. PRE	FINAL	(13) Les. Plan Hi PRE	FINAL	F 2,34
PAY	10.06	10.85	10.21	11.08	10.41	10.82	.92
VALUE	30.88	32.94	28.81	32.42	30.67	32.34	.78
TOTAL	101.23	108.41	97.42	107.74	100.06	106.84	.37
WORK CASES	40.51	43.32	39.44	43.40	41.08	43.44	.02

Table 19 shows that teacher's achievement in the development of lesson plans showed no relationship to pupil scores in the four areas. A possible explanation for this is that the criteria for lesson plan ratings did not include modern theory of vocational choice. Lesson plan criteria were based upon an integration of job-related informational input. Since the four areas reflected modern theories of occupational choice and mature attitudes, significant shifts could not reasonably have been expected.

TABLE 20

PUPIL ATTITUDINAL SHIFTS ASSOCIATED WITH TEACHER OVERALL SCORES AND SCORE SHIFTS

	Ov. All Low		Ov. All Aver.		Ov. All Hi			Ov. All Down		Ov. All Same		Ov. All Up		
AREA	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44	PRE	FINAL	PRE	FINAL	PRE	FINAL	F 2,44
PAY	10.30	10.62	10.15	10.84	9.89	10.98	1.28	9.85	10.80	9.84	10.67	10.59	11.07	2.29
VALUE	30.78	31.95	30.18	32.79	29.26	32.48	1.33	30.01	32.37	29.51	32.18	30.53	33.01	1.70
TOTAL WORK	102.05	105.78	98.84	108.26	97.84	107.85	.94	98.46	106.74	98.03	106.54	101.07	109.57	2.09
CASES	41.63	43.28	39.82	43.57	40.21	43.67	.24	46.72	43.70	41.12	43.63	39.09	43.32	.30

Table 20 shows the overall change dimension for teachers in relation to pupil scores. There were no F-values which reached statistical significance, although some shift did occur. For those teachers who shifted upward on the overall change dimension, higher pupil shifts were indicated on both the Pay subscale and the Total Opinions about Work scale.

Table 21

SUMMARY

	PAY	VALUES	TOTAL	WORK CASES
Five High F-Values	1. Crites Shift* 2. Opinions About Work 3. Overall Shift 4. Ed. Obj. Shift 5. Ed. Obj.	1. Crites Shift* 2. Subj. Matter 3. Opin. Work 4. Overall Shift 5. Imp. Self	1. Crites Shift** 2. Overall Shift 3. Opin. Work 4. Subj. Matter 5. Imp. Occ. Shift	1. Ed. Obj. Shift* 2. Crites* 3. Imp. Occ.* 4. Subj. Matter 5. Integ. St. Shift
Five Low F-Values	1. Sex 2. Crites 3. Opin. Wk. Shift 4. Wk. Cases Shift 5. Integ. Study	1. Sex 2. Integ. St. Shift 3. Crites Shift 4. Imp. Self Shift 5. Ed. Obj.	1. Sex 2. Crites 3. Imp. Self Shift 4. Int. St. Shift 5. Lesson Plan	1. Lesson Plan 2. Imp. Self 3. Integ. Study 4. Imp. Self Shift 5. Overall

**F-Value significant at .01 level

* F-Value significant at .05 level

Table 21 shows the five high and low F-values associated respectively with the Pay Subscale, Values of Work Subscale, Total Opinions about Work Scale, and Work Cases.

The higher number of significant F-values associated with the Work Cases Instrument indicates that this instrument is highly sensitive to pupils' attitudes. Because the Work Cases Instrument is empirically derived, its continued use as a criterion measure is recommended. It seems likely that 7th graders respond well to practical situations.

Table 15 also shows that shifts of the Crites Vocational Maturity Test were significant in three of the four areas. Teachers scores and shifts on this instrument seem to be highly indicative of the attitudes and attitude changes of their pupils.

The fact that in no instance were sex or subject matter significant supports the fact that both male and female teachers, teaching language arts and social studies, have the ability to implement job-related attitudes and information in an Image of the World of Work program.

Report of the Results of the Analysis of
Student Data in the RMEL
Image of the World of Work Project

The general purpose of the Image of the World of Work project was to determine whether the integration of occupational information type materials and activities into seventh grade language arts and social studies courses would have an effect on the students' perceptions of occupations and work. In order to evaluate the project, it was considered essential that we measure students' perceptions of the world of work with a before-after type design. Because it was considered likely that some change of perception would occur due to increased maturity, a control group of seventh grade students was established to permit a check on the maturity hypothesis. Thus the basic design for the project evaluation was as follows:

> 1. Eleven school systems were selected as project schools from a population of 140 school systems who applied. The school systems were selected on the basis of geography, socio-economic conditions, rural or urban, and size. A total of 67 teachers of seventh grade language arts and/or social studies were selected as project teachers from the systems.
>
> The teachers attended a one-week workshop prior to the start of the 68-69 school year. In this workshop they were presented with materials and techniques for integrating occupational information and affective dimension experiences into their courses. The work of the teachers was monitored throughout the year by visits from RMEL staff. Another section of this report contains a detailed description of the work with the teachers.
>
> 2. Eleven school systems were selected from the 140 applicants as control schools. A total of 51 teachers were selected from the school systems as control teachers. These teachers were not involved in any of the training activities. Their only involvement was that of administering the criterion instruments to their classes at the same times as the instruments were administered by the project teachers.
>
> 3. The criterion instruments for the project are included as Appendix A. The instruments in the booklet were administered in both the project and control schools during September, 1968, and again in April, 1969. The scores on the pre-post administrations are the raw data for the evaluation.
>
> The instruments were designed to elicit attitudes about work and work practices rather than to measure specific knowledge about jobs. The rationale, objectives, and procedures of the project were directed at attitudinal aspects of the world of work, and thus it was considered essential that the instruments be consistent with these objectives. A more detailed description of each part of the instrument follows:

a. Manpower Attitudes-The 25 items in this portion were taken from a 62 item instrument used by a project at Ohio University. These 25 items were the most discriminating items of the 62 in the Ohio University project. The Ohio University study did not attempt to sum item responses in any way to get a global attitude score. Consequently, we did not attempt such summing either, and analyzed the responses to each item separately.

b. Work Cases-This instrument was constructed especially for the project. The responses were keyed empirically by having a group of 50 personnel managers indicate by ranking which would be the most desirable to the least desirable response from their point of view. Weights were assigned to each response on the basis of these rankings. The weights are shown for each response on the instrument in the appendix, with a large weight being the most desirable response. Thus a high score across the ten work case items would indicate that the respondent's view of appropriate behavior is similar to the personnel managers' whereas a low score would indicate dissimilarity.

c. Opinions About Work-This instrument was constructed for the project using commonly employed attitude scale construction techniques. The 55 items were constructed and keyed in a manner such that the item scores could be summed to yield a meaningful score reflecting attitudes toward work. A high score was considered to reflect a mature, realistic attitude toward work, while a low score indicated that the person had a quite immature opinion about the world of work.

The pretest administration was subjected to a principal axis factor analysis and a varimax rotation. The 55 items were intercorrelated and this correlation matrix was analyzed. Six factors were identified by this procedure. Only two of the factors were clearly interpretable, however. One factor included items 38, 42, 54, 47, 39, 43, 49, 50, 33, 21, 28, 36, 32, 15, 55, 40, 10, 20, and 7 with magnitude of loadings in that order and all above .35. An examination of these items suggested that these items were measuring in common a value of work orientation. It was decided to obtain a score on these items by summing the item scores. A high score on the items was considered to indicate a strong value ascribed to working and a low score then indicated an orientation of work as a sort of "necessary evil."

The second factor included only items 53, 45, 48, 41, and 52 with the lowest loading being .56 and no other item with a loading as high as .35. Each of these five items deals with financial aspects of working. Thus a total score across the items was considered to reveal the respondent's feelings about the importance of pay on a job. For the total scale it was considered that a high stress on pay was immature. Consequently in summing across the five items a low score would indicate a feeling that the financial returns from a job were of high importance and a high score would indicate a feeling that pay is of relatively minor importance.

Thus three scores were obtained on the Opinions about Work scale. A total score which resulted from summing the 55 item scores, a value of work orientation score obtained by summing across the 19 items in Factor I, and a pay orientation score from summing across the five items in Factor II.

Data were obtained from 2860 students under the project teachers and 1958 students under the control teachers. The data on each of the 39 variables were analyzed by analysis of variance in a repeated measurement design with the following factors; sex, pretest-post test, and project- control group. Thus the design was a 2 x 2 x 2 factorial with repeated measures across subjects. The number of subjects included in each analysis varies for two reasons. First it was necessary that on each variable a subject have both the pre and post score. Because of absences from school on the days of test administration and omitted items some subjects had only one of the scores. These omissions were considered random and therefore non-contaminating to the study. Second the design required that the cell numbers be proportional. In order to obtain proportionality it was necessary to drop subjects from some cells. Such subjects were dropped from the cells at random.

In the presentation of the results the table includes the variable name and the direction of scoring. Then there is a matrix which contains the cell and marginal means and another matrix which contains the number of subiects in each cell. Finallv the table contains the analysis of variance summary. A brief discussion follows each table.

The order of presentation of results is as follows:

1. Score on pay orientation scale
2. Score on value of work orientation scale
3. Total score on Opinions about Work scale
4. Total score on Work Cases
5. Each of the 25 Manpower Attitude items

Before presenting the results it would be hopeful to explain the arrangement of material in the tables. The table title is the name of the scale or is the item in the case of the Manpower Attitudes. Next there is a definition of the meaning ascribed to a high or low score and the possible range of scores. The number of subjects refers to the number of boys and girls in the project and control groups. For example, if the table indicates 1266 project boys and girls and 760 control boys and girls this means that there were 1266 project boys, 1266 project girls, 760 control boys, and 760 control girls who were included in the analysis for a total of 4052 subjects. Furthermore, each subject had a pre-test score and a post-test score so that the number of datum points in the analysis is twice the number of subjects. In the example there would have been 8104 datum points.

Next the cell means are presented for the pre-test and the post-test. The cell means are the means of the ABC interaction in the ANOVA summary. The marginal means in the right most column of each matrix are the AC interaction means and the third row of each matrix contains the BC interaction means. The means of the main effects are presented below the matrices.

The ANOVA summary table should be self-explanatory. The F value was not reported whenever it was less than one. A discussion follows each table.

In evaluating the results, it should be recognized that the individual student is not necessarily the most appropriate sampling unit because of some possibility of dependency in the data of the students in the same classroom. It was felt, however, that sufficient classrooms had been included so that the dependency effects within classrooms was randomized out of the analysis, and thus it was decided that the increased sensitivity from the increase in degrees of freedom using individual subjects as the unit of analysis was desirable and would not yield misleading results.

The table F values for 1 and infinity degrees of freedom were used in all cases. An F-value of 3.84 was required for significance at the .05 level and an F of 6.64 at the .01 level.

The comparison of most interest in all analyses was the AC interaction, that is the interaction of treatment with test. A significant AC interaction indicated that changes from pre-test to post-test were dependent upon the treatment group. If the AC interaction indicated a greater change for the project students than the control students in the desired direction then it could be concluded that the project had the desired effect. A qualification should be placed on this possible outcome with the Manpower Attitude item scores. Because these items had a restricted range, only 1 to 5, it is possible that a significant interaction could result from a ceiling or floor effect. For example, if the control students scored higher than the project students on the pre-test they might not exhibit as much change on the post-test simply because the restricted range of the scale does not permit them to make as great a change.

TABLE 22
Pay Subscale

Low score- Pay not important **High score** Pay important **Score range** 5-25

Number of subjects
Project boys and girls- 2490
Control boys and girls- 1486

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	12.53	11.31	11.92	11.77	10.48	11.12
Control	12.27	11.14	11.70	11.87	10.83	11.35
BC interaction	12.43	11.24		11.81	10.61	

Pre-test mean = 11.84
Boys mean = 12.12
Experimental mean = 11.52
Post-test mean = 11.21
Girls mean = 10.92
Control mean = 11,52

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	.082	
B	Sex	1	2817.06	119.06**
	AB	1	12.24	
	Error (a)	3972	93978.99	
C	Test	1	789.11	109.63**
	AC	1	90.42	12.56**
	BC	1	.07	
	ABC	1	2.68	
	Error (b)	3972	28589.23	

The data in Table 22 are the pre-test and post-test means for project and control pupils and the analysis of variance summary table on the Pay Orientation Subscale.

Significant values were found for sex differences, pre-test and post-test, and a treatment by test interaction.

Boys reacted to pay as being more important than girls in the work situation. Significant pre and post test differences showed that students did not value pay as important on the post-test as they had on the initial test administration.

The significant treatment by test interaction shows that the experimental group had a higher decrease from pre to post test than the control group. This indicates that the treatment had a desirable effect in terms of devaluing the significance of pay in the world of work. Overall the students apparently do not regard the financial aspects of work as a highly important factor. The overall mean of 11.52 on a possible range of scores of 5 to 25 supports this observation.

TABLE 23
Values of Work Orientation

Low score- High orientation **High score** Low orientation **Score range** 15-95

Number of subjects
Project boys and girls- 2490
Control boys and girls- 1486

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	32.24	31.83	32.03	33.12	31.76	32.44
Control	33.37	32.88	33.13	33.28	32.52	32.89
BC interaction	32.66	32.22		33.18	32.04	

Pre-test mean = 32.44
Boys mean = 32.92
Experimental mean = 32.24
Post-test mean = 32.62
Girls mean = 32.13
Control mean = 33.01

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	1121.30	10.48**
B	Sex	1	1234.37	11.54**
	AB	1	31.97	
	Error (a)	3972	424874.05	
C	Test	1	57.64	1.70
	AC	1	189.59	5.60*
	BC	1	240.53	7.10**
	ABC	1	52.94	1.56
	Error (b)	3972	134497.81	

Table 23 contains data for the companion of the project and control group on the Values of Work Orientation Subscale.

The treatment effect was significant at the .01 level. Project pupils had a lower work values orientation mean score than the controls on both the pre-test and post-test. A low score is judged to be more favorable than a high score.

There was a significant difference in the mean scores of boys and girls; girls having more desirable work values orientation.

A significant treatment by test interaction is also shown. Project pupils' scores increased from pre to post test, while the control pupils' scores decreased. This result was not in accord with the predicted or desired results of the project. The reason for this shift for the project students is not apparent.

Overall the students in both groups exhibited favorable work values orientations in that the overall mean of 32.53 is quite low with the possible range of 15 to 95.

TABLE 24
Total Opinions About Work Scale

Low score-	High score	Score range
Mature Attitude	Immature Attitudes	55-190

Number of subjects

Project boys and girls-	2490
Control boys and girls-	1486

Means

	Pre-test Boys	Pre-test Girls	Pre-test AC int.	Post-test Boys	Post-test Girls	Post-test AC int.
Experimental	111.80	108.78	110.29	111.35	105.68	108.52
Control	112.94	109.57	111.30	112.09	108.09	110.09
BC interaction	112.22	109.11		110.58	106.58	

Pre-test mean = 110.67
Boys mean = 111.92
Experimental mean = 109.91

Post-test mean =109.10
Girls mean =107.85
Control mean =110.70

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	3122.11	4.95*
B	Sex	1	33051.93	52.40**
	AB	1	234.12	.37
	Error (a)	3972	2505333.78	
C	Test	1	4859.99	31.55**
	AC	1	142.05	
	BC	1	1848.54	15.00**
	ABC	1	427.42	2.78
	Error (b)	3972	611674.01	

Table 24 exhibits the Total Opinions about Work Scale for experimental and control pupils. The treatment effect is significant at the .05 level, indicating that project pupils held more mature work attitudes than control pupils. The significant differences in test means shows that all pupils shifted to more mature work attitudes from pre to post test. Girls had significantly more mature work attitudes than boys, and shifted more in the direction of mature work attitudes than boys.

TABLE 25
Total Work Cases Score

Low score- Little agreement with personnel mgr. **High score** Agreement with personnel mgr. **Score range** 0-90

Number of subjects
Project boys and girls- 2510
Control boys and girls-1518

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	40.71	42.47	41.59	42.80	43.71	43.25
Control	41.62	42.30	42.96	42.48	43.73	43.11
BC interaction	41.05	42.40		42.68	43.72	

Pre-test mean = 41.73
Boys mean = 41.86
Experimental mean = 42.42

Post-test mean = 43.20
Girls mean = 43.06
Control mean = 43.03

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	23.96	
B	Sex	1	2882.67	22.44**
	AB	1	61.86	
	Error (a)	4024	516955.64	
C	Test	1	4354.76	71.47**
	AC	1	123.90	2.03
	BC	1	49.11	
	ABC	1	239.44	3.93
	Error (b)	4024	245190.28	

Table 25 shows the means and the analysis of the total Work Cases scores. The individual work case analyses are not shown because the variability of scores on the individual cases was so small as to render the analyses meaningless. The summed score across the 10 work cases did result in sufficient variability to permit a meaningful analysis.

A significant difference can be seen from pre to post test administrations, showing more agreement with personnel managers on the final test administration.

A slight interaction effect of treatment by sex by test was shown. This results from the fact that project boys had a high increase in score from pre to post test than any of the other subgroups.

The possible score range on the work cases was 0 to 90. The overall mean of 42.46 indicates that the students were quite different from the personnel managers in their views of appropriate work behavior. Such a result suggests that the students' views of the world of work are not as mature as might be concluded on the basis of their scores on the Opinions about Work Scale.

TABLE 26
Manpower Attitude -1

Low score- Agree High score Disagree Score range 1-5

Number of subjects
Project boys and girls- 2532
Control boys and girls- 1520

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.41	3.60	3.50	3.29	3.49	3.39
Control	3.32	3.41	3.36	3.20	3.42	3.31
BC interaction	3.38	3.52		3.26	3.46	

Pre-test mean = 3.45
Boys mean = 3.32
Experimental mean = 3.45
Post-test mean = 3.36
Girls mean = 3.49
Control mean = 3.34

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	21.46	12.07**
B	Sex	1	63.97	35.97**
	AB	1	.72	
	Error (a)	4048	7199.57	
C	Test	1	17.08	17.71**
	AC	1	1.45	1.51
	BC	1	1.44	1.49
	ABC	1	1.68	1.74
	Error (b)	4048	3903.35	

A good reason for quitting a job is that you don't like the people you work with

The data in Table 26 indicate that project students were less likely to agree with the statement than controls, and girls were less likely to agree than boys. Furthermore, the students in general were more likely to agree on the post-test than the pre-test. It is difficult to argue which score direction reflects a desirable work attitude on this item. In any case, the lack of any significant treatment by test interaction indicates that the project did not affect the students' opinion on this item. The overall mean of 3.40 on a scale of 1 to 5 indicates a general tendency of the students to disagree with the statement.

TABLE 27

Manpower Attitude - 2*

Low score- Agree High score Disagree Score range 1-5

Number of subjects
Project boys and girls- 2532
Control boys and girls- 1520

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.73	3.94	3.84	3.82	4.03	3.93
Control	3.63	3.79	3.71	3.73	3.96	3.84
BC interaction	3.69	3.89		3.78	4.01	

Pre-test mean = 3.79
Boys mean = 3.74
Experimental mean = 3.89
Post-test mean = 3.89
Girls mean = 3.95
Control mean = 3.78

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	21.21	10.49**
B	Sex	1	86.86	42.97**
	AB	1	.16	
	Error (a)	4048	8182.67	
C	Test	1	22.29	23.87**
	AC	1	1.00	1.07
	BC	1	.43	
	ABC	1	.57	
	Error (b)	4048	3779.21	

A married worker with a family should be paid more than a single worker even if both do exactly the same job

The overall mean of 3.84 on this item in Table 27 indicates a general disagreement with the statement. In the comparison, the results indicated that the project students disagreed more than the control students, girls disagreed more than boys and there was more disagreement on the post-test than the pre-test. Again the AC (treatment by test) was not significant and it must be concluded that the project had no effect on how this item was answered.

TABLE 28

Manpower Attitude - 3*

Low score- Agree
High score Disagree
Score range 1-5

Number of subjects
Project boys and girls- 2506
Control boys and girls- 1512

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.96	2.97	2.97	3.36	3.33	3.35
Control	3.15	3.16	3.16	3.47	3.39	3.43
BC interaction	3.03	3.04		3.41	3.35	

Pre-test mean = 3.04
Boys mean = 3.22
Experimental mean = 3.16

Post-test mean = 3.38
Girls mean = 3.20
Control mean = 3.35

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	34.12	21.60**
B	Sex	1	.99	
	AB	1	.29	
	Error (a)	4014	6342.29	
C	Test	1	230.50	304.47**
	AC	1	5.64	7.45*
	BC	1	2.40	3.18
	ABC	1	.08	
	Error (b)	4014	3038.87	

Actually, whatever success I have in my work career depends pretty much on factors beyond my control

The control students were more likely to disagree with the item in Table 28 than the project students and all students were more likely to disagree on the post-test than on the pre-test. The significant AC interaction resulted from the fact that the project students exhibited a greater agree to disagree change from pre to post test than the control students. This result suggests that the project had an effect on opinions about this item in the desired direction. It must be recognized, however, that the control students had less room to change from pre to post test. Thus the ceiling effect, mentioned in the introduction to this section, might have contributed to the significant interaction. The overall mean of 3.21 suggests a rather neutral feeling by the students on this item.

TABLE 29
Manpower Attitude - 4*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects

Project boys and girls-	2512
Control boys and girls-	1500

Means

	Pre-test Boys	Pre-test Girls	Pre-test AC int.	Post-test Boys	Post-test Girls	Post-test AC int.
Experimental	1.95	1.95	1.95	1.85	1.88	1.87
Control	1.83	1.94	1.89	1.81	1.81	1.81
BC interaction	1.91	1.94		1.83	1.83	

Pre-test mean = 1.92
Boys mean = 1.87
Experimental mean = 1.91

Post-test mean = 1.85
Girls mean = 1.90
Control mean = 1:85

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	6.43	5.54*
B	Sex	1	1.76	1.52
	AB	1	.79	
	Error (a)	4008	4653.34	17.67**
C	Test	1	12.05	
	AC	1	.01	
	BC	1	.10	
	ABC	1	1.93	2.82
	Error (b)		2734.41	

If a person plans his education and training carefully, he is almost sure to succeed in his job career

The students were quite strong in their agreement with the item in Table 29 as reflected by the overall mean of 1.89. The control students agreed more than the project students and there was more agreement on the post-test than the pre-test. The project apparently had no effect on the students' feelings about this item because the AC interaction was not significant.

TABLE 30
Manpower Attitude - 5*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2508
Control boys and girls- 1508

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.28	2.30	2.29	2.40	2.44	2.42
Control	2.42	2.43	2.43	2.46	2.53	2.49
BC interaction	2.34	2.35		2.42	2.48	

Pre-test mean = 2.34
Boys mean = 2.38
Experimental mean = 2.36
Post-test mean = 2.45
Girls mean = 2.42
Control mean = 2.46

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	20.48	17.56**
B	Sex	1	2.44	2.09
	AB	1	.03	
	Error (a)	4012	4628.86	
C	Test	1	21.34	30.14**
	AC	1	1.63	2.31
	BC	1	.76	1.07
	ABC	1	.19	
	Error (b)	4012	2840.08	

Most employers are sincerely interested in the welfare of their workers.

The overall mean on the item in Table 30 of 2.40 indicates a tendency for the students to agree with this statement. The project students were more likely to agree than the control students and there was more agreement on the pre-test than the post-test. This pre to post change was not in the expected direction, but perhaps such a change is realistic at the age level of these students. The lack of a significant AC interaction indicates that the project had no special effect on how this item was answered.

TABLE 31
Manpower Attitude - 6*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2522
Control boys and girls- 1516

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.78	3.95	3.86	3.98	4.21	4.10
Control	3.83	4.14	3.98	3.88	4.22	4.05
BC interaction	3.79	4.02		3.95	4.21	

Pre-test mean = 3.91
Boys mean = 3.87
Experimental mean = 3.98

Post-test mean = 4.08
Girls mean = 4.12
Control mean = 4.02

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	2.80	1.62
B	Sex	1	121.36	70.16**
	AB	1	7.27	4.20*
	Error (a)	4034	6978.16	
C	Test	1	59.64	70.92**
	AC	1	13.11	15.59**
	BC	1	.92	1.09
	ABC	1	.12	
	Error (b)	4034	3392.22	

If someone gave me all the money I needed, I'd never go to work

Generally the students disagreed with the item in Table 31 as reflected by the overall mean of 4.00. Girls were more likely to disagree than boys and all were more likely to disagree on the post-test than on the pre-test. A significant sex by treatment interaction resulted from the fact that the girls differed more between project and control than the boys. The significant AC interaction resulted from the fact that the project students changed more from pre-test to post-test than the control students. The change was in the desired direction and thus indicates that the project had a desired effect on the students' opinions about this item.

TABLE 32
Manpower Attitude - 7*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2530
Control boys and girls- 1510

Means

	Pre-test Boys	Pre-test Girls	Pre-test AC int.
Experimental	3.75	4.02	3.89
Control	3.87	4.17	4.02
BC interaction	3.29	4.08	

	Post-test Boys	Post-test Girls	Post-test AC int.
Experimental	4.09	4.30	4.28
Control	4.01	4.33	4.17
BC interaction	4.06	4.32	

Pre-test mean = 3.93
Boys mean = 3.93
Experimental mean = 4.05

Post-test mean = 4.19
Girls mean = 4.20
Control mean = 4.10

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	5.36	3.21
B	Sex	1	148.30	88.90**
	AB	1	2.00	1.20
	Error (a)	4046	6748.97	
C	Test	1	130.47	178.01**
	AC	1	11.66	15.91**
	BC	1	.57	
	ABC	1	.87	
	Error (b)	4046		1.18

I wouldn't care what my job was like, as long as the pay was high

Girls were more likely to disagree with the item in Table 32 than boys and there was more disagreement on the post-test than on the pre-test. A desired project effect was evidenced by the significant AC interaction. The project students changed more in the desired direction than the control students. The overall mean of 4.06 indicated general disagreement with this item.

TABLE 33
Manpower Attitude - 8*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2518
Control boys and girls- 1514

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	1.69	1.68	1.68	1.65	1.56	1.60
Control	1.68	1.67	1.67	1.66	1.56	1.61
BC interaction	1.69	1.68		1.65	1.56	

Pre-test mean = 1.68
Boys mean = 1.67
Experimental mean = 1.64
Post-test mean = 1.61
Girls mean = 1.62
Control mean = 1.64

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	.00	
B	Sex	1	5.52	6.91**
	AB	1	.02	
	Error (a)	4028	3218.95	
C	Test	1	11.24	23.02**
	AC	1	.19	
	BC	1	3.71	7.60**
	ABC	1	.03	
	Error (b)	4028	1966.34	

All honest work is worthwhile, and therefore all workers deserve respect

The students generally agreed with the item in Table 33 as reflected by the overall mean of 1.65. Girls agreed more than boys and all agreed more on the post-test than on the pre-test. The significant BC interaction resulted from the fact that the girls showed more change to agreement on the post-test than the boys. A project effect was not evident because the AC interaction was not significant.

TABLE 34
Manpower Attitude -9*

Low score- Agree　　High score Disagree　　Score range 1-5

Number of subjects
Project boys and girls- 2474
Control boys and girls- 1494

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.78	3.98	3.88	4.00	4.08	4.04
Control	3.89	3.97	3.93	3.95	4.07	4.01
BC interaction	3.82	3.97		3.98	4.08	

Pre-test mean = 3.90
Boys mean = 3.90
Experimental mean = 3.96
Post-test mean = 4.03
Girls mean = 4.03
Control mean = 3.97

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	.20	
B	Sex	1	31.38	18.00**
	AB	1	.85	
	Error (a)	3964	6910.11	
C	Test	1	33.42	37.22**
	AC	1	3.42	3.82
	BC	1	1.55	1.72
	ABC	1	3,42	3.81
	Error (b)	3964	3559.68	

Work is a necessary evil.

There was general disagreement with the item in Table 34 as reflected by the overall mean of 3.97. Girls disagreed more than boys and there was more disagreement on the post-test than on the pre-test. The AC interaction was nearly significant and reflected somewhat more change from pre to post for the project students than the control students. This change was in the desired direction.

TABLE 35
Manpower Attitude - 10*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2510
Control boys and girls- 1508

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.38	2.46	2.42	2.72	2.72	2.72
Control	2.72	2.79	2.76	2.76	2.80	2.78
BC interaction	2.51	2.58		2.74	2.75	

Pre-test mean = 2.55
Boys mean = 2.63
Experimental mean = 2.57

Post-test mean = 2.74
Girls mean = 2.67
Control mean = 2.77

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	76.14	41.59**
B	Sex	1	3.90	2.13
	AB	1	.10	
	Error (a)	4014	7348.47	
C	Test	1	80.24	85.58**
	AC	1	35.71	38.08**
	BC	1	1.65	1.76
	ABC	1	.16	
	Error (b)	4014	3763.75	

Most American workers are paid just about what they deserve

The control students were more likely to disagree with the item in Table 35 than the project students. All students were more likely to disagree on the post-test. The significant AC interaction suggested an effect for the project in that the project students changed more from pre to post than the control students. It is difficult to say, however, what direction of change is desired on this item. The overall mean of 2.65 indicated a generally neutral feeling about this item.

TABLE 36
Manpower Attitude - 11*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2514
Control boys and girls- 1512

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	4.00	4.08	4.04	4.33	4.43	4.38
Control	4.15	4.23	4.19	4.31	4.46	4.38
BC interaction	4.16	4.14		4.32	4.44	

Pre-test mean = 4.10
Boys mean = 4.19
Experimental mean = 4.21
Post-test mean = 4.38
Girls mean = 4.29
Control mean = 4.29

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	11.94	9.38**
B	Sex	1	18.89	14.84**
	AB	1	.35	
	Error (a)	4022	5119.04	
C	Test	1	161.97	229.05**
	AC	1	9.92	14.03**
	BC	1	.68	
	ABC	1	.31	
	Error (b)	4022	2844.12	

It's too early to start thinking about my life's work

The overall mean of 4.24 indicated generally strong disagreement with the item in Table 36. The control students disagreed more than the project students, girls disagreed more than boys, and there was more disagreement on the post-test than on the pre-test. A project effect was suggested by the significant AC interaction which resulted from the fact that project students showed a greater pre-post change than the control students. The change was in the desired direction.

TABLE 37

Low score- Agree High score Disagree Score range 1-5

Number of subjects
Project boys and girls- 2470
Control boys and girls- 1486

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.47	3.46	3.46	3.52	3.61	3.56
Control	3.42	3.42	3.42	3.48	3.55	3.52
BC interaction	3.45	3.44		3.50	3.59	

Pre-test mean = 3.45
Boys mean = 3.48
Experimental mean = 3.51
Post-test mean = 3.55
Girls mean = 3.52
Control mean = 3.47

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	4.06	2.78
B	Sex	1	3.04	2.07
	AB	1	.01	
	Error (a)	3952	5789.30	
C	Test	1	19.32	25.42**
	AC	1	.01	
	BC	1	3.78	4.98*
	ABC	1	.10	
	Error (b)	3952	3004.28	

It will be hard for me to find a good job

The overall mean of 3.50 suggested a tendency to disagree with the item in Table 37. All disagreed more on the post-test than on the pre-test. The girls showed more pre-post change than the boys. No project effect was evidenced for this item.

TABLE 38
Manpower Attitude - 13*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2494
Control boys and girls- 1488

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.81	3.01	2.91	3.00	3.15	3.07
Control	2.73	2.83	2.78	2.68	2.90	2.79
BC interaction	2.78	2.94		2.88	3.05	

Pre-test mean = 2.86
Boys mean = 2.83
Experimental mean = 2.99
Post-test mean = 2.97
Girls mean = 3.00
Control mean = 2.79

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	80.57	37.28**
B	Sex	1	53.22	24.63**
	AB	1	.03	
	Error (a)	3978	8596.46	
C	Test	1	22.26	18.35**
	AC	1	11.33	9.34**
	BC	1	.06	
	ABC	1	2.95	2.43
	Error (b)	3978	4825.91	

Most people who are unemployed are shiftless and lazy

Overall the students were quite neutral on the item in Table 38 as evidenced by the overall mean of 2.92. The girls disagreed more than the boys, and the project students disagreed more than the control students. Also there was more disagreement on the post-test. A project effect was suggested by the significant AC interaction which resulted from the greater pre-post change for the project students than for the control students. The change was in the desired direction.

TABLE 39
Manpower Attitude - 14*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2456
Control boys and girls- 1488

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.66	2.75	2.71	2.76	2.86	2.81
Control	2.50	2.58	2.54	2.56	2.66	2.61
BC interaction	2.60	2.60		2.68	2.78	

Pre-test mean = 2.64
Boys mean = 2.64
Experimental mean = 2.76
Post-test mean = 2.73
Girls mean = 2.74
Control mean = 2.58

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	62.07	32.32**
B	Sex	1	18.50	9.61**
	AB	1	.01	
	Error (a)	3940	7586.98	
C	Test	1	16.07	16.72**
	AC	1	.40	
	BC	1	.05	
	ABC	1	.03	
	Error (b)	3940	3786.45	

The only reason most people work is for the money

The students' opinion about the item in Table 39 was generally neutral as evidenced by the overall mean of 2.69. The project students disagreed more than the control students, the girls disagreed more than the boys, and there was more disagreement on the post-test than on the pre-test. There was no evident project effect on this item since the AC interaction was not significant.

TABLE 40
Manpower Attitude - 15*

Low score- Agree	High score Disagree	Score range 1-5

Number of subjects
Project boys and girls- 2518
Control boys and girls-1510

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	4.08	4.24	4.16	4.29	4.48	4.38
Control	4.08	4.26	4.17	4.18	4.37	4.28
BC interaction	4.08	4.25		4.25	4.44	

Pre-test mean = 4.17
Boys mean = 4.17
Experimental mean = 4.27

Post-test mean = 4.34
Girls mean = 4.35
Control mean = 4.23

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	4.11	3.00
B	Sex	1	65.25	47.62**
	AB	1	.08	
	Error (a)	4024	5512.91	
C	Test	1	61.70	96.34**
	AC	1	6.44	10.06**
	BC	1	.25	
	ABC	1	.01	
	Error (b)	4024	2577.11	

"Taking it easy" on the job is all right as long as you don't get caught by the boss

The general response to the item in Table 40 was disagreement. This is reflected by the overall mean of 4.26. The girls disagreed on this item more than the boys and there was more disagreement on the post-test than on the pre-test. A project effect was observed through the significant AC interaction. The project students showed greater change in the desired direction from pre-test to post-test than the control group.

TABLE 41
Manpower Attitude - 16*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2508
Control boys and girls- 1514

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.59	3.51	3.55	3.82	3.84	3.83
Control	3.80	3.66	3.73	3.85	3.75	3.80
BC interaction	3.67	3.57		3.83	3.80	

Pre-test mean = 3.62
Boys mean = 3.75
Experimental mean = 3.69
Post-test mean = 3.82
Girls mean = 3.69
Control mean = 3.77

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	9.94	5.23*
B	Sex	1	8.93	4.70*
	AB	1	3.57	1.88
	Error (a)	4018	2636.73	
C	Test	1	29.96	100.25**
	AC	1	21.38	26.80**
	BC	1	2.58	3.23
	ABC	1	.20	
	Error (b)	4018	3204.89	

Luck will play an important role in determining whether I get a good job

There was a general tendency to disagree with the item in Table 41. This is reflected by the overall mean of 3.72. The control students disagreed more than the project students, boys disagreed more than girls, and there was more disagreement on the post-test than on the pre-test. The significant AC interaction resulted from the fact that the project students changed more from pre to post than the control students. This change was in the desired direction and the interaction suggested a project effect.

TABLE 42
Manpower Attitude - 17*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2496
Control boys and girls- 1502

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	4.02	4.43	4.22	4.16	4.62	4.39
Control	4.05	4.48	4.27	4.03	4.61	4.32
BC interaction	4.03	4.45		4.11	4.61	

Pre-test mean =4.24
Boys mean =4.07
Experimental mean =4.31

Post-test mean = 4.36
Girls mean = 4.53
Control mean = 4.30

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	.26	
B	Sex	1	425.26	336.61**
	AB	1	1.93	1.53
	Error (a)	3994	5045.77	
C	Test	1	30.27	45.51**
	AC	1	6.43	9.07**
	BC	1	3.28	4.93*
	ABC	1	1.14	1.71
	Error (b)	3994	2656.88	

Men ought to get higher pay than women even if both do exactly the same work

There was general disagreement with the item in Table 42 as reflected by the overall mean of 4.30. It was not surprising that the girls disagreed more with this statement than the boys. There was more disagreement with the item on the post-test than on the pre-test. The significant BC interaction resulted from a greater pre-post change for girls than boys. A project effect was evidenced by the significant AC interaction which resulted from the greater pre-post change for project students than control students. The change was in the desired direction.

TABLE 43
Manpower Attitude - 18*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2458
Control boys and girls- 1470

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.22	3.27	3.25	3.34	3.31	3.32
Control	3.28	3.24	3.26	3.16	3.19	3.17
BC interaction	3.24	3.26		3.27	3.26	

Pre-test mean = 3.25
Boys mean = 3.26
Experimental mean = 3.29
Post-test mean = 3.27
Girls mean = 3.26
Control mean = 3.22

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	8.44	5.85*
B	Sex	1	.09	
	AB	1	.14	
	Error (a)	3924	5658.83	
C	Test	1	.41	
	AC	1	12.12	14.28*
	BC	1	.38	
	ABC	1	2.56	3.01
	Error (b)	3924	3331.02	

Workers today don't take much pride in their work

The students generally were quite neutral or undecided about the item in Table 43. This is reflected by the overall mean of 3.26 which is near the scale midpoint of 3.00. Project students disagreed more than the control students. Furthermore, the AC interaction resulted from the fact that the project students moved to greater disagreement on the post than on the pre-test while the control students exhibited the opposite change. The significant AC interaction suggests a project effect on this item.

TABLE 44
Manpower Attitude - 19*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects
Project boys and girls- 2508
Control boys and girls- 1508

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.13	3.46	3.29	3.15	3.45	3.38
Control	3.15	3.43	3.29	3.08	3.43	3.25
BC interaction	3.13	3.45		3.12	3.44	

Pre-test mean = 3.29
Boys mean = 3.13
Experimental mean = 3.30

Post-test mean = 3.28
Girls mean = 3.45
Control mean = 3.27

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	1.40	
B	Sex	1	199.55	96.87**
	AB	1	.00	
	Error (a)	4012	8024.29	
C	Test	1	.10	
	AC	1	.87	
	BC	1	.02	
	ABC	1	1.35	
	Error (b)	4012	4470.66	

Married women with children under 15 should not hold a job

Generally the students were quite neutral or undecided in their opinion about the item in Table 44. The overall mean was 3.28. Not surprisingly the girls disagreed more with this statement than the boys. This was the only significant result observed on this item.

TABLE 45
Manpower Attitude - 20*

Low score- Agree
High score Disagree
Score range 1-5

Number of subjects
Project boys and girls- 2514
Control boys and girls- 1500

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.39	2.42	2.36	2.14	2.30	2.22
Control	2.21	2.48	2.34	2.18	2.34	2.26
BC interaction	2.26	2.44		2.16	2.31	

Pre-test mean = 2.35
Boys mean = 2.21
Experimental mean = 2.29

Post-test mean = 2.23
Girls mean = 2.38
Control mean = 2.30

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	.36	
B	Sex	1	56.84	30.34**
	AB	1	2.44	1.30
	Error (a)		7500.17	
C	Test	1	27.91	30.44**
	AC	1	1.36	1.48
	BC	1	.19	
	ABC	1	1.94	2.11
	Error (b)		3671.10	

People who really want to work can always find a job

The girls disagreed more with the item in Table 45 than the boys, although generally the students agreed with the item as evidenced by the overall mean of 2.29. There was a movement toward more agreement with the statement from pre-test to post-test. No project effect was apparent.

TABLE 46
Manpower Attitude - 21*

Low score- Agree **High score** Disagree **Score range** 1-5

Number of subjects

Project boys and girls- 2518
Control boys and girls- 1504

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	3.17	3.55	3.36	3.21	3.55	3.38
Control	3.15	3.45	3.30	3.12	3.54	3.33
BC interaction	3.16	3.51		3.18	3.55	

Pre-test mean = 3.34
Boys mean = 3.17
Experimental mean = 3.37
Post-test mean = 3.36
Girls mean = 3.53
Control mean = 3.32

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	6.14	2.85
B	Sex	1	259.22	120.50**
	AB	1	.01	
	Error (a)	4018	8643.41	
C	Test	1	1.15	1.20
	AC	1	.08	
	BC	1	.16	
	ABC	1	2.95	3.10
	Error (b)	4018	3828.66	

A worker who is a college graduate ought to be paid at least twice as much as a high school graduate.

There was a slight tendency to disagree with the item in Table 46 as evidenced by the overall mean of 3.35. The only significant difference in the analysis was that the girls were more likely to disagree with the statement than the boys. No effect of the project was evidenced.

TABLE 47
Manpower Attitude - 22*

Low score- Agree   **High score** Disagree   **Score range** 1-5

Number of subjects

Project boys and girls-	2512
Control boys and girls-	1502

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.56	2.84	2.70	2.48	2.59	2.53
Control	2.65	2.84	2.75	2.59	2.67	2.63
BC interaction	2.59	2.84		2.52	2.62	

Pre-test mean = 2.72
Boys mean = 2.56
Experimental mean = 2.62

Post-test mean = 2.57
Girls mean = 2.73
Control mean = 2.69

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	9.94	5.29*
B	Sex	1	61.04	32.51**
	AB	1	1.49	
	Error (a)	4010	7527.80	
C	Test	1	44.84	54.13**
	AC	1	1.20	1.45
	BC	1	11.21	13.53**
	ABC	1	.66	
	Error (b)	4010	3322.08	

I think my chances of getting a good job will be a lot better than my father had

The item in Table 47 had a response pattern indicating indecision or perhaps a slight tendency to agree with the statement. The overall mean was 2.65. The girls disagreed more than the boys, which might have been due to their statements requiring a comparison with the father. There was more agreement with the item on the post-test than on the pre-test. The significant BC interaction resulted from the fact that the girls had a greater pre-post change than the boys. The project students agreed more with the item than the control students, and, although not significant, the AC interaction indicated a possibility of a project effect in the desired direction in that the project students had a slightly greater pre-post change than the girls.

TABLE 48
Manpower Attitude - 23*

Low score- Agree High score Disagree Score range 1-5

Number of subjects
Project boys and girls- 2506
Control boys and girls- 1500

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.44	2.52	2.48	2.44	2.47	2.45
Control	2.32	2.33	2.33	2.34	2.40	2.37
BC interaction	2.39	2.45		2.40	2.44	

Pre-test mean = 2.42
Boys mean = 2.40
Experimental mean = 2.47

Post-test mean = 2.42
Girls mean = 2.45
Control mean = 2.35

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	27.30	21.27**
B	Sex	1	4.51	3.51
	AB	1	.16	
	Error (a)	4002	5137.44	
C	Test	1	.01	
	AC	1	2.10	2.87
	BC	1	.11	
	ABC	1	1.00	1.36
	Error (b)	4002	2923.79	

Young people need a lot more help in finding jobs than they are getting now

There was a general tendency to agree with the item in Table 48 as evidenced by the overall mean of 2.42. The project students showed less agreement with the statement than the control students. Although the AC interaction was not significant, there was a movement toward more agreement from pre to post by the project students while the control students moved in the opposite direction. Thus a possible project effect may be evidenced.

TABLE 49
Manpower Attitude - 24*

Low score- Agree
High score Disagree
Score range 1-5

Number of subjects
Project boys and girls- 2514
Control boys and girls- 1500

Means

	Pre-test			Post-test		
	Boys	Girls	AC int.	Boys	Girls	AC int.
Experimental	2.35	1.87	2.11	2.37	1.82	2.09
Control	2.47	2.03	2.25	2.43	1.42	2.18
BC interaction	2.39	1.93		2.40	1.80	

Pre-test mean = 2.16
Boys mean = 2.40
Experimental mean = 2.10

Post-test mean = 2.13
Girls mean = 1.90
Control mean = 2.22

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	23.17	13.04**
B	Sex	1	504.75	284.16**
	AB	1	.74	
	Error (a)	4010	7123.09	
C	Test	1	2.62	3.40
	AC	1	1.37	1.78
	BC	1	2.99	3.88*
	ABC	1	.01	
	Error (b)	4010	3089.50	

Women ought to be able to rise just as high in the world as men

Generally the students agreed with the item in Table 49. The overall mean was 2.14. The project students agreed more than the control students and, as would be expected on this item the girls agreed more than the boys. The significant BC interaction resulted from the fact that the girls moved toward greater agreement on the post-test while the boys' score stayed essentially the same. No project effect was apparent.

TABLE 50
Manpower Attitude- 25*

Low score- Agree High score Disagree Score range 1-5

Number of subjects
Project boys and girls- 2520
Control boys and girls-1500

Means

	Pre-test Boys	Pre-test Girls	Pre-test AC int.	Post-test Boys	Post-test Girls	Post-test AC int.
Experimental	2.31	2.52	2.42	2.37	2.52	2.45
Control	2.21	2.41	2.31	2.28	2.48	2.38
BC interaction	2.27	2.48		2.34	2.51	

Pre-test mean = 2.38
Boys mean = 2.31
Experimental mean = 2.44
Post-test mean = 2.42
Girls mean = 2.50
Control mean = 2.35

ANOVA Summary

	Source	DF	SS	F
A	Treatment	1	13.19	7.64**
B	Sex	1	71.84	41.60**
	AB	1	.14	
	Error (a)	4016	6936.22	
C	Test	1	3.85	4.23*
	AC	1	.63	
	BC	1	.80	
	ABC	1	.47	
	Error (b)	4016	3661.25	

Industry should hire high school graduates rather than dropouts

There was general agreement with the item in Table 50. The overall mean was 2.40. The control students agreed more than the project students, the boys agreed more than the girls, and there was a tendency toward more disagreement on the post-test than the pre-test. The AC interaction was not significant and thus no project effect was evident.

Summary

Generally there was a movement toward more desirable or mature work attitudes by all of the students, project and control, during the year. On those measured which showed a significant change from pre- test to post-test only the Work Values Orientation Subscale of the Opinions about Work Scale had a change in what would appear to be an undesired direction and this change was slight.

The results suggest a modest effect of the project. Of the 29 analyses of variance, there was a significant treatment by test interaction in twelve, and in two others the interaction approached significance. Furthermore, the significant interactions resulted in all cases but one from the fact that the project students changed more in the desired direction from pre to post-test than the control students. The one exception was the Work Values Orientation Subscale in which the project students moved in the less desired direction while the control students moved in the desired direction. Even so the project students had a more favorable score on the post-test than the control students.

Generally the girls scored in the more desirable or favorable direction than the boys. This result lends credence to the claim that the instruments measured something akin to maturity of attitudes about work. Seventh grade girls are more mature than seventh grade boys, and thus should respond to attitudinal items in a more mature manner. The fact that their scores were generally in the more desired direction then suggests that the instruments were measures of maturity.

The fact that about half of the analyses resulting from the AC interaction were significant supports the conclusion that the project had a desired effect. Where differential changes occurred, the changes generally favored the project students. Certainly the project effects were not dramatic, but they did occur. Dramatic effects could not be expected because the treatment was not dramatic. The language arts and social studies teachers were still teaching primarily language arts and social studies. The integration of occupational study into their courses was systematic but still constituted only a very minor part of the course. Thus little effect could be expected. The results are encouraging from our point of view and do support the basis for the project, which was that the integration of occupational study into seventh grade language arts and social studies courses will stimulate movement toward more mature work attitudes.

CONCLUDING REMARKS

IMAGE OF THE WORLD OF WORK

RECOMMENDATIONS FOR FUTURE PROJECTS

As a result of the pilot implementation of the Image of the World of Work program, a few of the concluding remarks are appropriate and may facilitate others who are interested in achieving similar objectives or utilizing similar strategies for alternate objectives. Although the recommendations are fairly general, they are gleaned from the problems and successes which have been experienced by program staff and consultants to the project. The recommendations to the potential interested persons are as follows:

1. Statistical analyses, evaluation procedures, and criterion measures should be decided upon, with various alternatives, before program implementation. Additional preliminary planning will tend to clarify program objectives and operations.

2. Teacher training procedures and guidelines should be implemented before the start of a teacher training program. Periods of teacher training should be lengthened and various blocks and levels of instruction may be organized. Continuous feedback of participating teachers and resource consultants is recommended throughout the program. Program staff members should make continuous visits to participating schools to assess teacher developments and activities.

3. Greater emphasis must be placed on job-related information and modern theories of vocational choice as adapted to the ability level of the pupils.

4. Instruments used in the present project should be reassessed for sensitivity and discriminativeness. Future projects should carefully select those instruments which may be valid for the program objectives and eliminate those which are not discriminating.

5. Selection of participating schools and teachers is of prime importance. Selection should be based principally upon the interest and support of principals and staff, along with the school's facilities for program operations. Once a school is selected for participation, it is recommended that principals and administrative staff, as well as teachers, be involved in program development and activities.

6. The use of a smaller number of participating schools and teachers would allow indepth analyses and more control of experimental treatments.

7. The approach taken in the present project, that of integrating vocation concepts into classroom content, is only one way of bringing the Image of the World of Work to pupils. Alternative procedures, such as creating separate blocks of instruction, and increased use of guidance counselors, for imparting occupational information should also be explored and evaluated. Different levels of implementation (i.e. grade school) may also be a useful alternative.

APPENDIX A

(Adapted by Sheppard from original by Crites)

FEELINGS ABOUT JOBS

Vocational Statements

1. You have to know what you are good at, and what you are poor at, before you can choose an occupation.

2. Ask others about their occupations, but a person should make his own choice.

3. It's unwise to choose an occupation until you have given it a lot of thought.

4. Once a person makes an occupational choice, he can't make another one.

5. In making an occupational choice, an individual needs to know what kind of a person he is.

6. A person can do anything he wants as long as he tries hard.

7. Your occupation is important because it determines how much you can earn.

8. A consideration of what you are good at is more important than what you like in choosing an occupation.

9. Plans which are indefinite now will become much clearer in the future.

10. Parents probably know better than anybody which occupation a person should enter.

11. Work is worthwhile mainly because it lets you buy things you want.

12. Work is drudgery.

13. Why should a person try to decide upon an occupation when the future is so uncertain.

14. It's probably just as easy to be successful in one occupation as it is another.

15. By the time a person is 15, he should have his mind pretty well made up about the occupation he intends to enter.

16. There are so many factors to consider in choosing an occupation, it is hard to make a decision.

17. Sometimes you can't get into the occupation you want to enter.

18. You can't go very far wrong by following your parent's advice about which occupation to enter.

19. Working an occupation is much like going to school.

20. The best thing to do is to try out several occupations, and then choose the one you like best.

21. There is only one occupation for each individual.

22. The most important consideration in choosing an occupation is whether you like it.

23. Whether you are interested in an occupation is not as important as whether you can do the work.

24. You get into an occupation mostly by chance.

25. It's who you know, not what you know, that's important in an occupation.

26. A person should choose an occupation which gives him a chance to help others.

27. First choose an occupation, then plan how to enter it.

28. A person whould choose an occupation in which he can someday become famous.

29. If someone has some doubts about what he wants to do, he should ask his parents or friends for advice and suggestions.

30. Choose an occupation which allows you to do what you believe in.

31. The most important part of work is the pleasure which comes from doing it.

32. It doesn't matter which occupation a person chooses as long as it pays well.

33. As far as choosing an occupation is concerned, something always comes along sooner or later.

34. Why worry about choosing an occupation when a person doesn't have anything to say about it anyway.

35. The best occupation is one which has interesting work.

36. I really can't find any occupation that has much appeal to me.

37. I had little or no idea of what working would be like.

38. When it comes to choosing an occupation, a person should make up his own mind.

39. I want to really accomplish something in my work--earn a lot of money or help a great number of people.

40. As long as I can remember I've known what I wanted to do.

41. I can't understand how some people could be so set about what they wanted to do.

42. My ideal occupation would have to be one which has short hours and nice working conditions.

43. A person should choose an occupation that gives him plenty of freedom to do what he wants.

44. I wanted an occupation which payed good money.

45. I often wondered how successful I would be in my occupation.

46. I know very little about the requirements of occupations.

47. I spend a lot of time wishing I could do work that I know I cannot ever possibly do.

48. If I can just help others in my work, I'll be happy.

49. I guess everybody goes to work sooner or later, but I didn't look forward to it.

50. I often daydreamed about what I wanted to be, but I really didn't have an occupational choice.

51. The greatest appeal of an occupation to me is the opportunity it provides for getting ahead.

52. Everyone told me something different, until I didn't know which occupation to choose.

53. A person should plan to follow the occupation his parents suggest.

54. I seldom thought about the occupation I wanted to enter.

55. Most people have a need to work.

56. A person should choose a job that will give him extra responsibilities.

57. Choosing an occupation is not so hard to do.

58. I didn't worry much about the kind of job I wanted.

59. Work is enjoyable.

60. I didn't think much about the kind of job I wanted.

NAME________________________________

IMPORTANCE OF QUESTIONS ABOUT OCCUPATIONS

Below are listed some questions about a prospective occupation which enter into choosing a vocation. You are to indicate how important you think each question is according to the following directions:

> After reading all the questions carefully, pick out the two most important ones and list their numbers in the boxes marked,"Two most important" in the chart at the bottom of this page. Cross the two numbers off the main list, then pick out the two that are least important and put their numbers in the boxes marked, "Two least important." After crossing off these numbers on the main list, pick out the three that are next most important and put their numbers in the boxes marked, "Three next to most important." After crossing off those three numbers, select the three that are next to the least important, and write their numbers in the appropriate boxes. Then put the remaining four numbers in the boxes in the middle of the chart. Check to make sure that all numbers from 1 - 13 have been placed in a box in the chart.

Questions:

1. What special training do I need for this field?
2. Do people work alone or in groups in this occupation?
3. What starting salary can I expect?
4. Is this work especially dangerous?
5. Does this occupation involve working with people, with data, or with things?
6. Is the work done in pleasant surroundings?
7. How long are the working hours?
8. What is the highest salary people can make in this occupation?
9. Is special equipment involved for this occupation?
10. Is there much freedom for decision making in this work?
11. How much vacation time does the occupation provide?
12. Does this work involve lots of pressure or deadlines?
13. In what part of the country would the work be?
14. Are people in this work closely involved with a finished product or a direct service?

	☐	☐			--------------- Two most important
	☐	☐	☐		----------- Three next to most important
CHART	☐	☐	☐	☐	
	☐	☐	☐		----------- Three next to least important
	☐	☐			--------------- Two least important

NAME ____________________

RELATIVE IMPORTANCE OF EDUCATIONAL OBJECTIVES

The following is a selected list of twelve educational objectives which might be adopted by a school. After reading the objectives, indicate their relative importance to you by ranking them from most important to least important. Place a one beside the most important, a two beside the next most important, etc., until all twelve have been ranked.

Rank	Objective
________	Effective oral and written communication
________	Adequate knowledge of physical and mental health
________	Broad knowledge of the world of work
________	Constructive use of leisure time
________	Appreciation of good music and literature
________	Subject matter mastery
________	Sound basis for choosing an occupation
________	Appreciation of democracy as a form of government
________	Responsible citizenship
________	Understanding of the decision-making processes
________	Preparation for family living
________	Accurate knowledge of self

NAME ________________________________

IMPORTANCE OF QUESTIONS ABOUT SELF

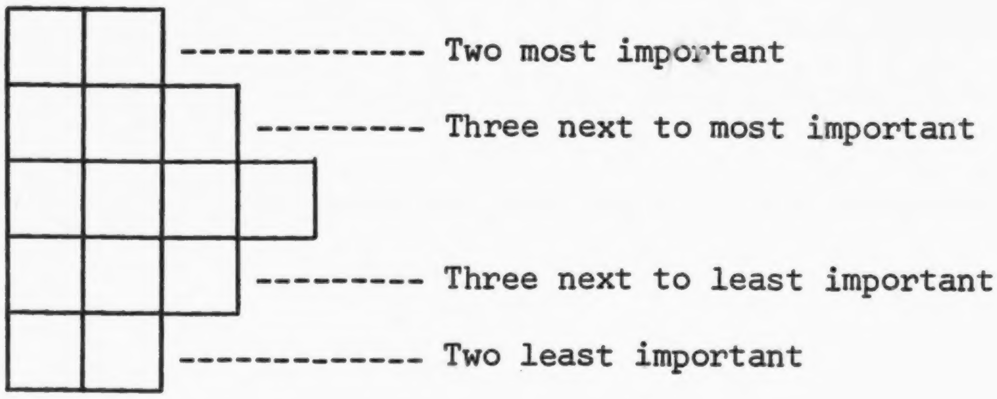
Below are listed some questions about oneself which enter into selecting an occupation. Each one has a number beside it. You are to indicate how important you think each question is according to the following directions:

> After reading all the questions carefully, pick out the two most important ones and list their numbers in the boxes marked, "Two most important" in the chart at the bottom of this page. Cross the two numbers off the main list, then pick out the two that are least important and put their numbers in the boxes marked, "Two least important." After crossing off these numbers on the main list, pick out the three that are next most important and put their numbers in the boxes marked, "Three next to most important." After crossing off those three numbers, select the three that are next to the least important, and write their numbers in the appropriate boxes. Then put the remaining four numbers in the boxes in the middle of the chart. Check to make sure that all numbers from 1 - 13 have been placed in a box in the chart.

Questions:

1. Do I like to work under pressure and meet deadlines?
2. What are my special aptitudes?
3. *Do I prefer to work alone?*
4. What is my general ability level?
5. Do I like to work at my own pace without much pressure?
6. Do I like work where someone else makes most of the decisions?
7. What kind of salary should I seek?
8. Do I prefer to work closely with other people?
9. Can I stand a long training program?
10. Do I like work which requires that I follow rules made by others?
11. Does it bother me not to be able to see a finished product from my work?
12. How rapidly do I learn?
13. Do I prefer to make my own decisions in my work?
14. How interested am I in science, social service or clerical activity?

CHART


------------- Two most important
--------- Three next to most important
--------- Three next to least important
------------- Two least important

(Adapted by Sheppard from original by Crites)

FEELINGS ABOUT JOBS

Vocational Statements

1. You have to know what you are good at, and what you are poor at, before you can choose an occupation.
2. Ask others about their occupations, but a person should make his own choice.
3. It's unwise to choose an occupation until you have given it a lot of thought.
4. Once a person makes an occupational choice, he can't make another one.
5. In making an occupational choice, an individual needs to know what kind of a person he is.
6. A person can do anything he wants as long as he tries hard.
7. Your occupation is important because it determines how much you can earn.
8. A consideration of what you are good at is more important than what you like in choosing an occupation.
9. Plans which are indefinite now will become much clearer in the future.
10. Parents probably know better than anybody which occupation a person should enter.
11. Work is worthwhile mainly because it lets you buy things you want.
12. Work is drudgery.
13. Why should a person try to decide upon an occupation when the future is so uncertain.
14. It's probably just as easy to be successful in one occupation as it is another.
15. By the time a person is 15, he should have his mind pretty well made up about the occupation he intends to enter.
16. There are so many factors to consider in choosing an occupation, it is hard to make a decision.
17. Sometimes you can't get into the occupation you want to enter.

Ranking Worksheet

Rank		
________	Career Day	A career day is held each year where specialists in each field discuss their work.
________	Occupations Course	A one-semester course devoted to the study of occupations is offered on an elective basis.
________	Occupational Library	An occupational library is established containing pamphlets, college catalogs, and periodicals about occupations.
________	Integrated Study	Language arts and social studies teachers emphasize occupational aspects of people and places studied.
________	Psychological Tests	A psychological testing program is established in which occupational interest and aptitude tests are stressed.
________	Occupational Film Assemblies	An occupational information assembly is held each month and a film about an occupation is shown and discussed.

Name_______________________

Opinion Survey
on the Presentation of Occupational Information

Almost everyone agrees that occupational information is important, but very few educators are in complete agreement as to how to present such information to seventh graders. Many approaches have been proposed, and among these, the following six have been strongly supported:

Approach	Description
Career Day	A career day is held each year where specialists in each field come to the school and discuss their work.
Occupations Course	A one-semester course devoted to the study of occupations is offered to pupils on an elective basis.
Occupational Library	An occupational library is established containing pamphlets, college catalogs, and periodicals about occupations for reference by pupils.
Integrated Study	Language arts and social studies teachers emphasize occupational aspects of people and places studied as they present the subject matter in these areas.
Psychological Tests	A psychological testing program is established in which occupational interest and aptitude tests for pupils are stressed.
Occupational Film Assemblies	An occupational information assembly is held each month and a film about an occupation is shown to pupils and discussed with them.

Thus far, no one has proven just which of these approaches is best, so the one to use with seventh graders is a matter of opinion. We would like to have your opinion on this issue also. Please indicate your opinion on the following page by ranking the six approaches from most effective to least effective. Place a "one" beside the approach you consider most effective, a "two" beside the next, etc.until you have ranked all six approaches.

APPENDIX B

NAME ____________________

(To be used with Sheppard's statements)

FORM I

Read each statement and decide whether you agree with it or disagree with it. If you agree or mostly agree with the vocational statement, blacken the circle in the column headed with T on the separate answer sheet. If you disagree or mostly disagree with the statement, blacken the circle in the column headed F on the answer sheet. Be sure your marks are heavy and black. Erase completely any answer you wish to change.

	T	F		T	F			
1.	( )	( )	21.	( )	( )	41.	( )	( )
2.	( )	( )	22.	( )	( )	42.	( )	( )
3.	( )	( )	23.	( )	( )	43.	( )	( )
4.	( )	( )	24.	( )	( )	44.	( )	( )
5.	( )	( )	25.	( )	( )	45.	( )	( )
6.	( )	( )	26.	( )	( )	46.	( )	( )
7.	( )	( )	27.	( )	( )	47.	( )	( )
8.	( )	( )	28.	( )	( )	48.	( )	( )
9.	( )	( )	29.	( )	( )	49.	( )	( )
10.	( )	( )	30.	( )	( )	50.	( )	( )
11.	( )	( )	31.	( )	( )	51.	( )	( )
12.	( )	( )	32.	( )	( )	52.	( )	( )
13.	( )	( )	33.	( )	( )	53.	( )	( )
14.	( )	( )	34.	( )	( )	54.	( )	( )
15.	( )	( )	35.	( )	( )	55.	( )	( )
16.	( )	( )	36.	( )	( )	56.	( )	( )
17.	( )	( )	37.	( )	( )	57.	( )	( )
18.	( )	( )	38.	( )	( )	58.	( )	( )
19.	( )	( )	39.	( )	( )	59.	( )	( )
20.	( )	( )	40.	( )	( )	60.	( )	( )

____
Name

Opinions About Work

Here are some statements about work. Each statement expresses a slightly different point of view. You are to read each statement and then indicate how you feel about it by drawing a circle around the letter that represents your own opinion as follows:

SA	if you strongly agree with the statement
A	if you agree but not strongly so
N	if you are neutral or undecided
D	if you disagree but not strongly so
SD	if you strongly disagree with the statement

Remember, the only correct answer is the one which represents your opinion.

PLEASE RESPOND TO EVERY ITEM

1. Most successful people have worked hard . . . . SA A N D SD
2. No matter how much schooling a person has had he can still learn from his work . . . . SA A N D SD
3. The world would be a better place if people didn't have to work . . . . SA A N D SD
4. A person's attitude toward life is affected by whether or not he likes his work. . . . . SA A N D SD
5. I want a job that I don't have to work at more than 40 hours a week . . . . SA A N D SD

6. Working ought to be fun . . . . SA A N D SD
7. When someone likes the work he is doing his whole life is happier . . . . SA A N D SD
8. I think it's a good idea for young people to have a part-time job . . . . SA A N D SD
9. People are foolish if they do more than they are told to do on a job . . . . SA A N D SD
10. Work should be more than just something for which you receive pay . . . . SA A N D SD
11. A job has dignity in proportion to the quality of a worker's performance . . . . SA A N D SD

12. It doesn't matter very much whether or not a person likes his work . . . . SA A N D SD
13. If a girl plans to get married she doesn't need to think about a vocation . . . . SA A N D SD
14. The work people do should help them feel useful . . . . SA A N D SD
15. Most employers are pretty good about giving workers time off from their jobs if there is a good reason . . . . SA A N D SD
16. Lots of satisfaction can be gotten from helping others do their jobs better . . . . . SA A N D SD
17. People who work long hours must be very unhappy with their jobs . . . . SA A N D SD
18. Even a ditch digger should be considered a success if he does his job well . . . . SA A N D SD
19. The better a business serves its customers, the longer that business is likely to last . . . . SA A N D SD
20. If a company is going to produce a good product, all workers must do their best at making it that way . . . . SA A N D SD
21. If a person works hard he can reach a lot of his goals . . . . SA A N D SD
22. If people do poor work on a job, they shouldn't be paid for it . . . . SA A N D SD
23. A person should pick a career and stick with it for life . . . . SA A N D SD
24. Once a person gets a good job, he doesn't need any more education . . . . SA A N D SD
25. No matter what the job is, it should be done well . . . . SA A N D SD
26. People who like their jobs would rather work than take a vacation . . . . SA A N D SD
27. No one can expect anyone to work really hard on a job . . . . SA A N D SD
28. Doing something useful is pretty important in a job . . . . SA A N D SD
29. Everyone should try to find work they really like to do . . . . SA A N D SD
30. People who work hard on a job are only kidding themselves . . . . SA A N D SD
31. Most people would not work if they didn't have to do so . . . . SA A N D SD
32. Happiness is doing a job well . . . . SA A N D SD
33. There is a lot of satisfaction in learning a job . . . . SA A N D SD

Opinions About Work
Page 3, Cont.

34. It shouldn't matter to an employer if workers are a little bit late each day. . . . . SA A N D SD
35. Most employers try to get workers to do more than they should . . . . SA A N D SD
36. Most truly great men have liked their work . . . . SA A N D SD
37. Everyone should expect to keep learning from his work all through life . . . . SA A N D SD
38. Everyone owes it to himself to do the best job he can at everything he does . . . . SA A N D SD
39. If you work hard enough you are pretty likely to succeed on a job . . . . SA A N D SD
40. Having goals to strive for is pretty important to me . . . . SA A N D SD
41. I don't care what I do as long as I am well paid . . . . SA A N D SD
42. I want a job that will allow me to learn lots from it . .. . SA A N D SD
43. It is important to do a job right . . . . SA A N D SD
44. Most people who lose their jobs really can't help it . . . . SA A N D SD
45. A worker cannot like a job unless he is well paid . . . SA A N D SD
46. People should work just as hard when the boss is gone as when he is present . . . . SA A N D SD
47. Workers should always try to do their best . . . . SA A N D SD
48. Pay is more important than whether you like a job . . . SA A N D SD
49. A person should really try to keep learning even after he finishes school . . . . SA A N D SD
50. Every employee should be proud of his work . . . . SA A N D SD
51. Being happy in ones work is one of the most important goals in life . . . . SA A N D SD
52. The best thing about working is the paid vacation . . . SA A N D SD
53. The most important thing about any job is the money you get for doing it . . . . SA A N D SD
54. Everyone should try hard to produce his best . . . . SA A N D SD
55. A person who wants satisfaction from life will set at least a few goals to work toward . . . . .. SA A N D SD

Name ______________________________

Manpower Attitudes

The following statements are expressions of attitudes or feelings about a wide variety of topics.

For each of the statements, you are asked to tell whether you Strongly Agree, Agree, Disagree, or Strongly Disagree. If you have no particular feeling about the statement or do not understand the statement, mark Neutral.

This is not a test. There are no right or wrong answers. Your responses will not affect your grades in any way. We want you to indicate your personal opinions about these topics.

Draw a circle around the letter that represents your own opinion as follows:

SA if you strongly agree with the statement
A if you agree but not strongly so
N if you are neutral or undecided
D if you disagree but not strongly so
SD if you strongly disagree with the statement

PLEASE RESPOND TO EVERY ITEM

1. A good reason for quitting a job is that you don't like the people you work with........................ SA A N D SD
2. A married worker with a family should be paid more than a single worker even if both do exactly the same job.. SA A N D SD
3. Actually, whatever success I have in my work career depends pretty much on factors beyond my control...... SA A N D SD
4. If a person plans his education and training carefully, he is almost sure to succeed in his job career.. SA A N D SD
5. Most employers are sincerely interested in the welfare of their workers.............................. SA A N D SD

6. If someone gave me all the money I needed, I'd never go to work..................................... SA A N D SD
7. I wouldn't care what my job was like, as long as the pay was high................................. SA A N D SD

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Ohio University, Athens, Ohio 45701

8. All honest work is worthwhile, and therefore all workers deserve respect........................... SA A N D SD
9. Work is a necessary evil........................... SA A N D SD
10. Most American workers are paid just about what they deserve........................... SA A N D SD

11. It's too early to start thinking about my life's work........................... SA A N D SD
12. It will be hard for me to find a good job............ SA A N D SD
13. Most people who are unemployed are shiftless and lazy........................... SA A N D SD
14. The only reason most people work is for the money..... SA A N D SD
15. "Taking it easy" on the job is all right as long as you don't get caught by the boss..................... SA A N D SD

16. Luck will play an important role in determining whether I get a good job........................... SA A N D SD
17. Men ought to get higher pay than women even if both do exactly the same work........................ SA A N D SD
18. Workers today don't take much pride in their work..... SA A N D SD
19. Married women with children under 15 should not hold a job........................... SA A N D SD
20. People who really want to work can always find a job........................... SA A N D SD

21. A worker who is a college graduate ought to be paid at least twice as much as a high school graduate........................... SA A N D SD
22. I think my chances of getting a good job will be a lot better than my father had..................... SA A N D SD
23. Young people need a lot more help in finding jobs than they are getting now........................... SA A N D SD
24. Women ought to be able to rise just as high in the world as men........................... SA A N D SD
25. Industry should hire high school graduates rather than dropouts........................... SA A N D SD

____
Name

WORK CASES

Here are some descriptions of actual cases involving work and jobs. In each case some decision must be made by the person mentioned. You are to read each one and then choose the action you think the person should take by making a check beside the action of your choice. Be sure to mark only one choice for each case.

Case Number One

Joe has always been able to work with his hands faster than anyone else. He now has a good job making boxes along with eight other men. Joe finds that he can easily make twice as many boxes in a day as anyone else, but all the men get paid the same. What should Joe do?

_____Continue working as fast as he can.
_____Find a job where he is paid for the number of boxes he can make each day.
_____Ask the boss what to do.
_____Work as fast as the other men do.

Case Number Two

Mary is a secretary to Mr. Jones. He has just left on a business trip for one week. Mary doesn't have any work to do in the office now and she has a chance to go on a picnic tomorrow, but can't reach Mr. Jones to ask his permission to go. What should she do?

_____Go on the picnic and tell Mr. Jones when he gets back.
_____Work the first two hours tomorrow then go on the picnic.
_____Come to work tomorrow as usual.
_____Go on the picnic and not tell Mr. Jones.

Case Number Three

Pete is a mechanic in a garage. Although he has worked on many different kinds of cars, he has just been told to repair a foreign car that he knows nothing about. Although he thinks he might be able to fix it, he isn't sure. What should he do?

_____Go ahead and try to fix it.
_____Tell the boss he isn't sure he can fix the car.
_____Try to fix the car after work this evening.
_____Ask another mechanic to help.

Case Number Four

This is Randy's first day at work in a big grocery store. AT noon he sees some other employees take some expensive food into the back room and eat it, then hide the box it was in. What should Randy do?

_____Tell the boss about it.
_____Pay no attention since it is not his business.
_____Ask the employees who had the food what the deal is.
_____Ask some other employees (who did not have the food) what the deal is.

Case Number Five

Lou has a pretty good job working for an insurance company. He has two more days' vacation time coming to him. Although he is supposed to tell his supervisor a week in advance when he wants his vacation, he would really like to take it tomorrow since his best friend is coming to visit him. What should he do?

_____Talk to the boss about it.
_____Go by the rules and not take the vacation tomorrow.
_____Go ahead and take the vacation.
_____Ask his friend to come with him to work so they can visit during slack periods.

Case Number Six

Sue has a job in a factory testing radios. She finds some that are not quite as good as they should be, but which can pass the tests. What should she do?

_____Pass the radios along.
_____Talk to the boss.
_____Ask a fellow worker what to do
_____Do nothing since the radios passed her test.

Case Number Seven

Sam has a job working for a candy company which makes a very popular candy bar. Sam is one of two men who know the recipe for making this candy bar. A friend of Sam's wants to start a new candy company and hire Sam so Sam can use the recipe. Sam would get twice as much money working for the new company. What should Sam do?

_____Offer to take the job but leave the recipe behind.
_____Take the job but change the recipe slightly.
_____Stay with the first company and not reveal the recipe.
_____Tell his present boss about the offer.

Case Number Eight

Jim has held a job as a cook in a restaurant for two years. He makes a satisfactory salary, but isn't especially happy. He has always wanted to be a salesman, but couldn't find a job selling when he finished school. He now has a chance to try selling insurance in a nearby town. At first he will make less money, but if he succeeds he will make more in the long run. What should Jim do?

_____Take the new job.
_____Ask for a leave so that if the new job doesn't work out he can come back.
_____Try the new job at night, but keep the present one.
_____Forget about the new job.

Case Number Nine

Mary is a first grade teacher. She likes her work but has a chance to make more money as a buyer for a large department store. What should Mary do?

_____Take the buyer's job for a summer.
_____Talk to her brother who owns a store.
_____Keep on being a teacher since she likes it.
_____Take the buyer's job.

Case Number Ten

Henry has a good job as a foreman in a soap factory. As a foreman he makes an excellent salary and his men like him. Henry has just been offered a job as a vice president of a shoe manufacturing company. Although he would not make as much money or have as many men to supervise, his title would sound more impressive. What should Henry do?

_____Take the new job.
_____Keep the old job.
_____Ask his boss for a new title.
_____Talk to his men about it.

APPENDIX C

SOCIAL SCIENCE

TEACHER - STUDENT

PROGRAM PLAN

SOURCE: EXPLORING THE OLD WORLD

ACTIVITIES

TASKS

HOW EARLY PEOPLE LIVED

INPUT OBJECTIVES		JOB TITLE STUDENT ACTIVITY	TEACHER ACTIVITY	PAGES DATE	
		PEOPLE	1. Pictures Films & Filmstrips Books-supplemental 2. Discuss, clarify, elaborate as desirable. 3. Which of these attitudes and value still apply today and if so, where.		PRODUCT CRITERIA (STUDE Share any related resourc (commercial-created) Role play (Socio-drama) Write-create story which man may be facing today which could be equally difficult. EXAMPLE: 1. First family settling the moon. 2. First families living communities on the oc floor. 3. Water pollution along coasts of U.S. has forced fisherman to g as far as the Southwe Pacific Islands for f tuna.
DESIRE TO WORK	●	EARLY MAN - gathered food hunted farmed			
RESPONSIBILITY	●				
DEPENDABILITY	●				
LOYALTY	●	DATA			
LIFE ASPIRATION	●	Discoveries died-No way to pass on his knowledge in writing			
ADAPTABILITY	●				
APPRECIATION FOR QUALITY	●				
VALUE OF COOPERATION	●	THINGS FIRE-Cooked food (responsible to family and tribe)			
PERSONAL SATISFACTION	●	STONE WEAPONS-(responsible to family and tribe)			
DIGNITY OF WORK WELL DONE	●	CLOTHING-domesticated animals' hides, sheared wool-weaved the thread into cloth POTTERY			
PRIDE IN ACCOMPLISHMENT	●	EVALUATION			

8-1-68

PROGRAM PLAN

ACTIVITIES

TASKS

DATE

OBJECTIVES

JOB

.10 PEOPLE

.20 DATA

.30 THINGS

PAGES

SEPT.

DESIRE TO WORK

RESPONSIBILITY-
DEPENDABILITY

LOYALTY

LIFE ASPIRATION

ADAPTABILITY

APPRECIATION FOR QUALIT

VALUE OF COOPERATION

PERSONAL SATISFACTION

DIGNITY OF WORK
WELL DONE

PRICE IN
ACCOMPLISHMENT

PRODUCT

EVALUATION

PROG. PLAN Rev. 8-2-68

ACTIVITIES TASKS

INPUT OBJECTIVES	JOB TITLE	PAGES DATE	
DESIRE TO WORK ● RESPONSIBILITY-DEPENDABILITY ●	PEOPLE		PRODUCT CRITERIA
LOYALTY ● LIFE ASPIRATION ● ADAPTABILITY ● APPRECIATION FOR QUALITY ●	DATA		
VALUE OF COOPERATION ● PERSONAL SATISFACTION ● DIGNITY OF WORK WELL DONE ●	THINGS		
PRIDE IN ACCOMPLISHMENT ●	EVALUATION		

Rev. 9-3-68

PROGRAM PLAN

TEACHER____________________
SCHOOL____________________
SUBJECT____________________
DATE____________________

SOURCE____________________
UNIT____________________
PAGE____________________

INPUT OBJECTIVES	ACTIVITIES	TASK	STUDENT PRODUCT CRITERIA
DESIRE TO WORK	PEOPLE		
RESPONSIBILITY-DEPENDABILITY			
VALUE OF COOPERATION	DATA		
PERSONAL SATISFACTION			
PRIDE IN ACCOMPLISHMENT	THINGS		
DIGNITY OF WORK WELL DONE			
APPRECIATION FOR QUALITY	TEACHER EVALUATION		
LOYALTY			
ADAPTABILITY			
LIFE ASPIRATION			

Rev. 10-4-68

PROGRAM PLAN

TEACHER ____________________
SUBJECT ____________________
SCHOOL ____________________
DATE ____________________

TEXT ____________________
UNIT ____________________
PAGES ____________________
RESOURCES ____________________

	INPUT OBJECTIVES	LESSON FEATURES	TEACHER ACTIVITIES	STUDENT TASKS	STUDENT PRODUCT CRITERIA (GOAL)
A	DESIRE TO WORK	PEOPLE			TANGIBLE
B	RESPONSIBILITY-DEPENDABILITY				
C	LOYALTY				
D	LIFE ASPIRATION	DATA			INTANGIBLE
E	ADAPTABILITY				
F	APPRECIATION FOR QUALITY				
G	VALUE OF COOPERATION	THINGS			EVALUATION
H	PERSONAL SATISFACTION				
I	DIGNITY OF WORK WELL DONE				
J	PRIDE IN ACCOMPLISHMENT	TEACHER EVALUATION			

④

Rev. 11-6-68

PROGRAM PLAN

TEACHER ________________
SUBJECT ________________
SCHOOL ________________
DATE ________________

ATTITUDES & LESSON THEME SUMMARY ________________
____
____
RESOURCES ________________

INPUT OBJECTIVES	LESSON FEATURES	ATTITUDES	TEACHER ACTIVITIES	ATTITUDES	STUDENT TASKS	STUDENT PRODUCT CRITERIA (GOAL)
DESIRE TO WORK	People					TANGIBLE
RESPONSIBILITY - DEPENDABILITY						
LOYALTY						
LIFE ASPIRATION	Data					
ADAPTABILITY						
APPRECIATION FOR QUALITY						
VALUE OF COOPERATION	Things					
PERSON SATISFACTION						INTANGIBLE
DIGNITY OF WORK WELL DONE						
PRIDE IN ACCOMPLISHMENT						
TEACHER EVALUATION (List attitude by letter in column above)						EVALUATION

(A-1)

Rev. 10-5-68

PROGRAM PLAN

TEACHER ________________________
SUBJECT ________________________
SCHOOL ________________________
DATE ________________________

ATTITUDES & Lesson Theme ________________________
Summary ________________________
Resources ________________________

INPUT OBJECTIVES	LESSON FEATURES	ATTITUDES	TEACHER ACTIVITIES	ATTITUDES	STUDENT TASKS	STUDENT PRODUCT CRITERIA (GOAL)
A DESIRE TO WORK	PEOPLE					TANGIBLE
B RESPONSIBILITY-DEPENDABILITY						
C LOYALTY						
D LIFE ASPIRATION						
E ADAPTABILITY						
F APPRECIATION FOR QUALITY						
G VALUE OF COOPERATION						
H PERSONAL SATISFACTION						INTANGIBLE
I DIGNITY OF WORK WELL DONE	DATA					
J PRIDE IN ACCOMPLISHMENT						
TEACHER EVALUATION (List attitude by letter in Column)						EVALUATION
	THINGS					

TEACHER: ____________________
SUBJECT: ____________________
SCHOOL: ____________________

PR AM PLAN
IMAGE OF THE WORLD OF WORK

Rev. 12-7-68
UNIT: ____________________
LESSON TITLE: ____________________
DURATION: (exact dates) ____________________

PROGRAM OBJECTIVES

CONTENT

ATTITUDINAL
A.______
B.______
C.______
D.______
E.______
F.______
G.______
H.______
I.______
J.______

LESSON FEATURES

TEACHER'S EVALUATION OF THE ATTITUDINAL ELEMENTS OF THIS LESSON
How effective do you feel this lesson was in influencing attitudes toward the world of work? (circle one)

EFFECTIVE 1 2 3 4 5 INEFFECTIVE

WHY?

I feel that this lesson had some influence on the following attitudes.

A.___ B.___ C.___ D.___ E.___ F.___ G.___ H. I.___ J.___

TEACHER ACTIVITIES

TEACHING RESOURCES

EVALUATION OF STUDENTS

___Quiz
___Formal Test
___Recitation
___Student reports
___Student projects

STUDENT TASKS

___Note Taking
___Small group discussion
___Library research
___Book reports
___Personal Inquiry
___Class Discussion
___Field trip
___Reading
___Essay writing
___Socio-drama
___Role playing
___Debate
___Art work
(maps, models, etc.)
___Listening
___Viewing

___Other

CLARIFY:

TEACHER: ____________
SUBJECT: ____________
SCHOOL: ____________

IMAGE OF THE WORLD OF WORK
PROGRAM PLAN

UNIT: ____________
LESSON TITLE: ____________
DURATION: ____________

PROGRAM OBJECTIVES		LESSON FEATURES	TEACHER ACTIVITIES	STUDENT TASKS
CONTENT OBJECTIVES	ATTITUDINAL			
	A. ____ B. ____ C. ____ D. ____ E. ____ F. ____ G. ____ H. ____ I. ____ J. ____			____Note taking ____Small group discussion ____Library research ____Book reports ____Personal Inquiry ____Class Discussion ____Field Trip ____Reading ____Essay writing ____Socio-drama ____Role playing ____Debate ____Art work (maps) ____ ____ ____Other

TEACHER'S EVALUATION OF THE ATTITUDINAL ELEMENTS OF THIS LESSON

How effective do you feel this lesson was in influencing attitudes toward the world of work? (circle one)

EFFECTIVE 1 2 3 4 5 INEFFECTIVE

WHY?

I feel that this lesson did influence the following attitudes:
A.___ B.___ C.___ D.___ E.___ F.___ G.___ H.___ I.___ J.___

TEACHING RESOURCES

EVALUATION OF STUDENTS

- ____Quiz
- ____Formal Test
- ____Recitation
- ____Student reports
- ____Student projects

CLARIFY:

APPENDIX D

NOTICE TO OCCUPATIONAL EDUCATION TEACHERS

To assist the teachers in achieving the objectives of the Image of the World of Work project, the Rocky Mountain Educational Laboratory, Inc. is initiating a series of essays on the most recent ways of viewing occupations and occupational choice. Each essay will discuss one aspect of vocational choice as it might apply to seventh graders. It is hoped that the teachers will use the essays in preparing lesson plans and in sensitizing their pupils to occupations and the world of work. The first essay is enclosed. Another essay will be sent to you in about two weeks.

PEOPLE, DATA AND THINGS -- A WAY OF LOOKING AT OCCUPATIONS

Essay Number One

There are many ways to present information about occupations for exploration and discussion. For example, we can focus on what the person does by pointing out the various components of the job. We can also discuss jobs in terms of the kinds of training or education that are needed for the job. At times, jobs will also be discussed in terms of the benefits to the worker such as pay, prestige, vacations, travel, security, etc. These are all factors on which jobs can vary and are important points to consider when discussing jobs.

Presentation of occupational information by itself is probably not very effective unless the student is able to relate the information about the job to his own abilities and interests. Thus, we should encourage the student to think about what he likes to do, what he can do, and what kind of work situation he might like as we present information about jobs. Furthermore, at the junior high level, it is probably as important, if not more important, that we *teach the students how to evaluate jobs in relation to themselves rather than teach them about many different jobs*. One very important reason for indecisiveness about jobs, job dissatisfaction, and unnecessary job mobility is that people do not know how to analyze a job in relation to their own abilities and interests and find jobs that are consistent with abilities and interests. Because the junior high school is designed in part for exploratory purposes, this is the appropriate time to teach students how to explore.

In this essay and in two or three more to follow, we will offer some suggestions about ways to teach students how to think about jobs.

The U.S. Employment Service, in preparing the most recent edition (1965) of the Dictionary of Occupational Titles (DOT), developed a system for describing jobs in terms of the function performed. They ascertained that the functions of a job could be classified under three general headings: Data, People, and Things--with different levels under each of these headings. For example, a job that would have a big data function would be one in which the worker would work with symbols, numbers, and words to a great extent. Bookkeeper would be an example of a job with a large data function. Jobs with a strong people function would be those where the worker had to interact with people to a great extent such as salesmen, and jobs with a strong things function would be those where the worker manipulated machines or objects to a great extent, such as truck driver. Certainly, many jobs would involve all of the functions. A secretary for example, works with data, interacts with people, and manipulates objects.

The point of all this is that this functional classification provides us with a useful way of analyzing and thinking about jobs. We can have the students investigate a job and attempt to determine the extent to which it involves the various functions. Furthermore, we can encourage the student to think about himself in terms of these functions. Does he like to work with people? Is he good with manipulating machines and making them go? Does he enjoy writing or working with numbers? As he learns to think of his interests and abilities in terms of these functions and as he learns to look at jobs in terms of these functions, he has learned a useful method for exploring the world of work. Beyond this, he has also learned something that will help him use the DOT. The last three digits of every job in the six digit DOT number indicate the functions for a job. The fourth digit indicates the data function, the fifth digit is the people function, and the sixth digit is the things function.

We do not feel we sould necessarily use the DOT numbers extensively at the junior high level, because the numbers indicate more than just how much of this function is shown on the job. They also indicate the level of the function, and it would be difficult for junior-high-age students to judge themselves in terms of level.

We do believe, however, that we can use the classification effectively by simply encouraging the students to analyze jobs generally in terms of the functions and also to think about themselves in terms of the functions.

In the next essay we will provide some suggestions in terms of looking at job attitudes and the job environment in relation to the student's attitudes and values.

In implementing these suggestions, you may want to include this way of analyzing jobs in your lesson planning.

DISCRETIONARY DECISIONS ON A JOB

Essay Number Two

One of the major factors contributing to valid occupational choice relates to the number of decisions an individual makes while performing a job and the way these decisions are made. So fundamental is this element in performing a job that it can actually be described according to how much or how little freedom in making decisions a worker has in carrying out his job duties.

Almost all jobs involve decisions. It should be readily apparent, however, that the decisions to be made while working will vary tremendously from one job to another. For example, the owner of a store must decide what stock he will keep on hand and when to buy it. A salesman must decide on which prospective customers he will call each day. A secretary must make decisions about whether or not to call her boss to the phone when he is in conference. A teacher must decide what assignments to make, when to give examinations, and what final marks to give students. A farmer must decide what and when to plant, when to sell and when to buy. Even a janitor makes decisions: what room to clean first, when to order a new supply of light bulbs, what sweeping compound to buy and whether or not to shovel snow off the walks. The important point to be recognized is that most jobs require decision making, but the scope of the decisions varies greatly from one job to the next, as well as the amount of freedom the individual performing the job has in making them. Thus, one way to understand jobs is to analyze the decisions made while working and to relate the decisions to one's own personal likes and dislikes about making decisions.

Some individuals enjoy making decisions. Usually these individuals can weigh evidence rapidly and make decisions quickly. More often than not their decisions will be correct. Others don't like to make decisions. These individuals will dwell on minor details and remote possibilities to such an extent that they worry about their decisions and actually become anxious about them. It follows, then, that if an individual who worries about decisions constantly is forced to make them all the time in his work, he will be unhappy. Conversely, if an individual likes to make decisions but seldom has a chance to do so, he will be unhappy in his work.

Thus, important insight into a job can be obtained by asking such questions about it as:

1) How many decisions must I make?
2) What is the scope of the decisions (in terms of number of people affected or amount of money involved)?
3) How fast must the decisions be made?
4) How much evidence is available on which to make decisions?
5) How many other people are available to verify the decision, once made?
6) Who will check on the decision to make sure it is right?
7) How soon does the decision maker know whether he was right or not?
8) Is all the work prescribed for me on this job?

The freedom which an individual has in making decisions on a job is usually referred to as "discretionary authority." The greater the freedom and the fewer individuals who will be checking the decision, the greater the discretionary authority of the job. Certainly a surveyor working a great distance from civilization has much discretionary authority. Contrast this with the job of an inspector on a production line whose procedures are precisely defined for him and whose decisions to accept or reject a product will be checked immediately by a supervisor. The work of the inspector is definitely prescribed for him.

In considering the discretionary or prescribed attributes of a job it is important to note that there are high paying jobs of each kind. There are also different levels of education required for each kind. Examples of high paying jobs in which procedures are prescribed include quality control chemists, accountants, and auditors. There is nothing either "good" or "bad" or "right" or "wrong" about the decision making aspects of a job. In other words, the decision making dimension of jobs is critical only in relation to how the individual performing the job feels about making decisions. This dimension encourages an individual to think about potential occupations in relation to his own personality characteristics--one of the most important contributors to job satisfaction.

A seventh grade student should not be expected to become highly capable at analyzing jobs in terms of the decision making or discretionary and prescribed aspects of the job. We feel, however, that the introduction of these concepts in the seventh grade will provide the students with another procedure that will be useful in studying and thinking about the world of work and themselves.

MAINTENANCE AND MOTIVATION NEEDS

Essay Number Three

The first two essays we sent you presented some ideas about studying jobs in terms of job duties. We suggested that jobs could be studied by whether the job tasks pertain to people, data, or things, and whether the job tasks are discretionary or prescribed. Essentially, the first two essays were concerned with having the student look at his abilities and interests in relation to certain job requirements. In this essay we shall discuss jobs from a different point of view; that of looking at some aspects of the general question, "What does the worker get from the job?"

Herzberg has developed a scheme for examining jobs in terms of this general question. We believe that some of the concepts that Herzberg has defined can be used effectively in helping junior high students explore occupations.

Herzberg has found from his research that there seem to be two general kinds of individual needs that might be met on a job. He calls these classes of needs "maintenance needs" and "motivation needs." Maintenance needs are those needs that maintain the individual as a person and social being. These needs are met by providing the person with adequate economic benefits, comfortable physical surroundings, opportunity for social interaction, opportunity for status, and security in the job. These are very important considerations in that without adequate provision of such benefits for the worker he will be dissatisfied in his work. A dissatisfied worker is certainly not desired, whether from the standpoint of the worker, the employer, or society.

Motivation needs, on the other hand, are those needs that, when satisfied, permit the individual to grow and develop as an individual. Such needs are met by policies that allow the worker to be involved in the work, use his abilities to capacity, to exercise authority, and generally to perform so that he contributes to company growth as well as his own growth. Herzberg has found that provision of the opportunity to fulfill motivation needs leads to worker satisfaction.

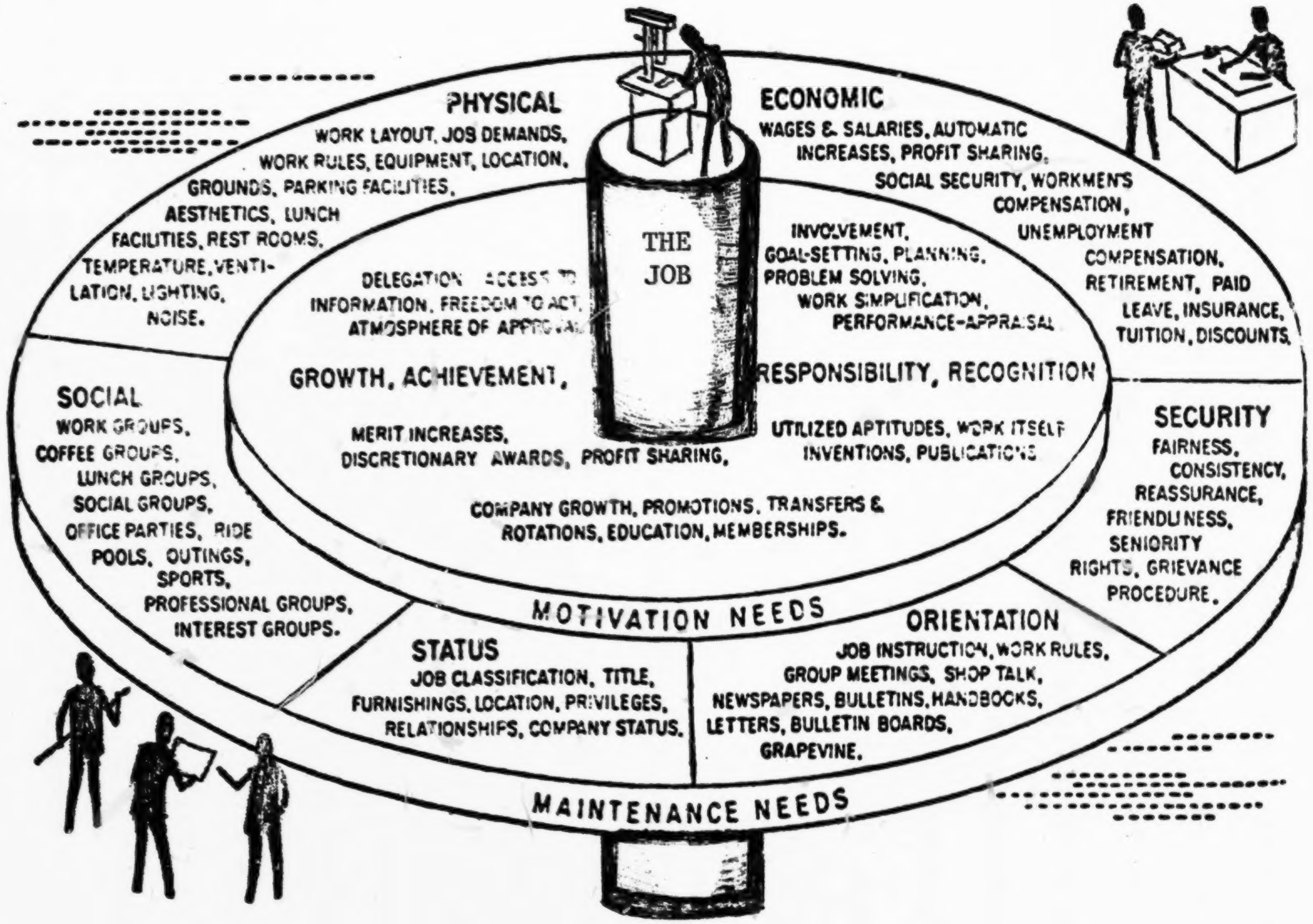
One of the very important findings of the work of Herzberg is the relationship between worker satisfaction and the two kinds of needs. The relationship can be summarized as follows:

Fulfillment of the maintenance needs is important to preventing worker dissatisfaction but does not contribute to greater worker satisfaction. What this means is that it is important that a job provide adequate opportunity for satisfaction of maintenance needs in order to prevent worker dissatisfaction, but above a certain level, additional provisions will not enhance worker satisfaction. For example, a worker who feels he is paid adequately will not be dissatisfied, but an increase in wages will not necessarily make the worker more satisfied nor more productive. In order to increase worker satisfaction and productivity, the worker should be given the opportunity to fulfill motivation needs. In other words, once a job provides adequately for maintenance needs, then in order to increase satisfaction and productivity, the job should be such that it provides opportunity to fulfill motivation needs. Parenthetically, I wonder how well our teaching positions meet this kind of situation.

We think that a student would have another useful method of thinking about jobs if he can analyze them in terms of how well they satisfy these two kinds of needs. Traditionally, our job description materials have been concentrated on how well the job provides for maintenance needs. The tie-in between worker satisfaction and motivation needs suggests that we should attend to this aspect as much as or even more than the maintenance need aspect, however.

The attached chart may be useful for you in planning lessons to include discussion of the concepts described in this essay. The chart was developed by Scott Myers of Texas Instruments and is reproduced from the _Harvard Business Review_, June-July, 1956. Additional discussions of the concepts in this essay will be found in the book _Work and the Nature of Man_ by Fredrick Herzberg.

A Way at Looking at Work


PHYSICAL
WORK LAYOUT, JOB DEMANDS, WORK RULES, EQUIPMENT, LOCATION, GROUNDS, PARKING FACILITIES, AESTHETICS, LUNCH FACILITIES, REST ROOMS, TEMPERATURE, VENTILATION, LIGHTING, NOISE.
ECONOMIC
WAGES & SALARIES, AUTOMATIC INCREASES, PROFIT SHARING, SOCIAL SECURITY, WORKMEN'S COMPENSATION, UNEMPLOYMENT COMPENSATION, RETIREMENT, PAID LEAVE, INSURANCE, TUITION, DISCOUNTS.
THE JOB
DELEGATION, ACCESS TO INFORMATION, FREEDOM TO ACT, ATMOSPHERE OF APPROVAL.
INVOLVEMENT, GOAL-SETTING, PLANNING, PROBLEM SOLVING, WORK SIMPLIFICATION, PERFORMANCE-APPRAISAL
GROWTH, ACHIEVEMENT,
RESPONSIBILITY, RECOGNITION
MERIT INCREASES, DISCRETIONARY AWARDS, PROFIT SHARING,
UTILIZED APTITUDES, WORK ITSELF INVENTIONS, PUBLICATIONS
COMPANY GROWTH, PROMOTIONS, TRANSFERS & ROTATIONS, EDUCATION, MEMBERSHIPS.
SOCIAL
WORK GROUPS, COFFEE GROUPS, LUNCH GROUPS, SOCIAL GROUPS, OFFICE PARTIES, RIDE POOLS, OUTINGS, SPORTS, PROFESSIONAL GROUPS, INTEREST GROUPS.
SECURITY
FAIRNESS, CONSISTENCY, REASSURANCE, FRIENDLINESS, SENIORITY RIGHTS, GRIEVANCE PROCEDURE.
MOTIVATION NEEDS
STATUS
JOB CLASSIFICATION, TITLE, FURNISHINGS, LOCATION, PRIVILEGES, RELATIONSHIPS, COMPANY STATUS.
ORIENTATION
JOB INSTRUCTION, WORK RULES, GROUP MEETINGS, SHOP TALK, NEWSPAPERS, BULLETINS, HANDBOOKS, LETTERS, BULLETIN BOARDS, GRAPEVINE.
MAINTENANCE NEEDS

SERVICE OR PRODUCT

Essay Number Four

Work is undertaken for a purpose. Webster's New Collegiate Dictionary emphasizes this point when it defines work as "Exertion of strength or faculties to accomplish something." Careful consideration of "what is accomplished" through work is a meaningful way to look at occupations, especially when viewed in relation to "what one receives satisfaction" from accomplishing.

Whenever an individual accepts a job, he "contracts" with his employer to use his energies toward accomplishing something. Ordinarily, the employer defines what it is that is to be accomplished, when it will be accomplished, and in what manner. When an individual accepts a job, he agrees to abide by the definitions set forth in the "contract." In return for his efforts, the employer agrees to "pay" the employee in some manner (such as salary and/or commission); to provide satisfactory working conditions; and to be concerned with various other job factors such as paid holidays, extra pay for overtime, various degrees of job security, etc.

Nowhere in the "contract" is there any guarantee of job satisfaction, however. Important as this element is to the worker, it cannot be automatically "built into" the work contract. It must be sought by the worker from among the myriad of possible jobs he might perform in relation to his own unique personal characteristics. One element of work important to job satisfaction is the kind of end product resulting from the job. Although there are many ways to view the result of "accomplishment", perhaps the most meaningful one for seventh grade pupils in the dichotomy between service and product. Actually the dichotomy between these two "results of accomplishment" is not a clear-cut one; rather it is a continuum with varying degrees of each extreme intermingled along any point within the range. Graphically, this concept can be illustrated as follows:

SERVICE PRODUCT

CONTINUUM OF RESULT OF ACCOMPLISHMENT

Such jobs as carpenter, cake decorator, artist, architect, printer, welder, sign painter, and toy assembler would fall along the right-hand side of the continuum, since something tangible results from the effort at work. Such jobs as teacher, receptionist, gas station attendant, personnel manager, insurance adjuster, minister, and waitress would lie along the left-hand side of the line since they are primarily service occupations. The precise point along the continuum at which a job should be located is much less important than the concept of viewing jobs from the service versus product point of view.

Just as jobs differ in end results of effort expended, so do preferences for types of accomplishment. Some individuals get very little satisfaction from work which does not result in a tangible product which can be seen, touched, and judged. Perhaps you have known teachers who have left the field simply because they could identify no tangible results from their efforts. Thus, it can be seen that if job satisfaction is to be maximized, it will be helpful for junior high students to raise the question about jobs, "Does work on this job result primarily in a service?" or "Does work on this job result in a product?" Likewise, they can begin to ask of themselves, "Am I happier when performing a service or when I am making something?"

It can be noted that there is a relationship between the "service-product" aspect of jobs, and the "people, data, things" aspect. In most instances the job content of people and data will parallel the job end result "service," and "things" will parallel "product." We feel that understanding both of these concepts and their interrelationship will contribute substantially to the ultimate job satisfaction experienced by your pupils.

DEADLINES AND PRESSURE ON THE JOB

Essay Number Five

One of the memories I have of growing up in my small home town in the Middle West is that of the life style of the only reporter on the weekly "County Newspaper." Whether this man had a name other than "Scoop" I do not know, for no one in the town called him anything else.

The paper came out on Thursday at noon. Since he was the only reporter, and since this was his livelihood, Scoop's very life revolved around getting the paper out on time. Friday was known as Scoop's day to sleep. Saturday and Sunday were known as his days for visiting and for leisurely writing. On Monday and Tuesday Scoop moved at a vigorous trot. On Wednesday, however, Scoop ran everywhere he went and he could usually be seen running far after sundown on Wednesday evening. Why? So that he could meet the paper's Thursday deadline. On several occasions Scoop was carried from the newspaper office on Thursday afternoon in utter exhaustion--because he had worked so hard to meet his deadline. Yet, Scoop never complained. He loved his work and was probably one of the happiest men in town. So preoccupied was Scoop with meeting deadlines that it never occurred to him that there might be another way of life--one without deadlines. Even if such a thought had occurred to him, I doubt that Scoop would have given up his beloved weekly paper to consider another "life". The fact is that Scoop loved deadlines. They were such an integral part of his life that he actually would have been unhappy without them.

What does my memory of Scoop have to do with occupational education? Simply this--one way of looking at jobs is the number and kind of deadlines involved in a job or the amount of pressure under which the individual works in performing the job. Some jobs are characterized by a tremendous amount of pressure--reporter, radio announcer, aircraft control operator, airlines check-in clerk, bus driver, etc. Other jobs involve very few deadlines other than those which are imposed by the individual himself--farmer, assembler, receptionist, housewife, cashier, etc. Now it must be noted that all jobs involve some pressure and deadlines, but jobs do differ extensively in this regard. In some jobs the pressure is predictable, and in other jobs the pressure in unpredictable. For example, even though the farmer or rancher's life involves only a minimal amount of pressure overall, there are times when the crop must be harvested fast, when the animals must be cared for, or when the crop must be planted. Or, consider the secretary whose boss is frequently out of town and who is left with very little work to complete while he is away. It is quite likely that the pressure under which she works increases considerably when the boss returns.

One way of looking at the pressure surrounding jobs is to view them according to three categories: (a) jobs which are repetitive and which can be performed by a highly skilled person with ease; (b) jobs which have occasional but unpredictable pressures; and (c) jobs which involve predictable pressure and consistent deadlines. Most jobs can be readily classified into one of these broad groups.

People, too, differ in their ability to work well under pressure. Some people detest pressure. Others will do very little work without it. It follows, then, that satisfaction from work is likely to be enhanced when one who prefers pressure has a position in which he experiences pressure. Likewise, satisfaction from work is likely to be enhanced when one who dislikes pressure is in a position where he experiences little of it.

Amount of pressure and number of deadlines are important characteristics of occupations for young people to consider as they make their selection of jobs. Self insight into the reactions one has to pressure and to deadlines is an important condition toward which to strive in relating one's personal characteristics to the world of work. Considerations to both will increase the young person's likelihood of job satisfaction.

WORKING ALONE OR IN GROUPS

Essay Number Six

Jobs differ greatly according to whether the work is performed by an individual (a) working in relative isolation, (b) working independently but in the company of other people, or (c) interacting with other people as part of the job. People also differ on this dimension. Some people work best and like situations where they are independent and do not associate a great deal with other people on the job. It is difficult to imagine that a person would be very happy or successful as a farmer if he were not relatively independent and capable of working alone much of the time.

Other people like to be independent in their work, but at the same time they like work situations where they have contact with other people. Office workers such as secretaries or bookkeepers are examples of workers of this kind. Their work doesn't really require that they interact with other people, but the work situation is such that they come in contact daily with several other people.

Then there are jobs in which the work itself requires that the worker interact with other people. Waitresses, clerks, teachers, and doctors are examples of workers who must interact with other people as part of the job. Certainly, a teacher would be pretty miserable and also quite ineffective without ability and interest in working with other people.

There is another difference among these kinds of jobs that is related to the extent to which they involve working with other people. In the first two work situations described above, the worker is quite independent, meaning among other things that success on the job is pretty much up to the individual worker, and his performance can be judged quite well in terms of tangible results achieved. On the other hand, the success of workers in jobs that require interaction with other people is more likely to be dependent on what the other people are doing. Consequently, in such jobs it is often difficult to evaluate precisely the performance of an individual working either by himself or with others. Workers in positions involving extensive interaction have to be able to tolerate this kind of ambiguity.

The purpose of this essay is to present another way that jobs might be studied. The content of this essay is really an expansion of the essay on people, data, and things. We hope that the ideas in this essay will be helpful in planning discussion of the "people" dimension of jobs. Students should be encouraged to consider how much and what kind of involvement a job has with other people, and also to consider their own abilities and interests in working with other people.

School________________________
Subject________________________

RESOURCE ESSAY QUESTIONNAIRE

During the past two months you have received a series of short essays relating to various World of Work concepts. This exercise is an attempt to assess the practical value of the following six essays. Please refer to them by number in your answers.

1. "People, Data and Things--A Way of Looking at Occupations"
2. "Discretionary Decisions on a Job"
3. "Maintenance and Motivation Needs"
4. "Service or Product"
5. "Deadlines and Pressures on the Job"
6. "Working Alone or in Groups"

1. Were you able to relate the essay information to any of your daily lesson plans?

___Yes ___No

2. Were the concepts presented in the essays easy to understand?

___Yes___No

3. Which of the essays did you find to be the easiest to understand?

#1___ #2___ #3___ #4___ #5___ #6___

Why?

February 25, 1969

ESSAY EVALUATION

Denver, Colorado Workshop

1. Were you able to relate the essay information to any of your daily lesson plans?

   Yes 19 No 10

2. Were the concepts presented in essays easy to understand?

   Yes 23 No 6

3. Easiest to understand?

   #1 7 #2 5 #3 2 #4 7 #5 14 #6 13

   Blank 3

4. Most difficult to understand?

   #1 8 #2 12 #3 7 #4 4 #5 0 #6 1

   Blank 6

5. Most relevant?

   #1 9 #2 2 #3 3 #4 3 #5 10 #6 14

   Blank 6

4. Which of the essays did you find to be the most difficult to understand?

   #1___ #2___ #3___ #4___ #5___ #6___

   Why?

5. Which of the essays were most relevant to your subject matter?

   #1___ #2___ #3___ #4___ #5___ #6___

6. What major ideas do you recall from each of the essays?

   Essay #1 -

   Essay #2 -

   Essay #3 -

   Essay #4-

   Essay #5 -

   Essay #6 -